

117 ①

Supreme Court, U.S.
FILED

08 937 JAN 23 2009

OFFICE OF THE CLERK
No.

IN THE
Supreme Court of the United States

AVENTIS PHARMA S.A.
AND AVENTIS PHARMACEUTICALS INC.,
Petitioners,
v.

AMPHASTAR PHARMACEUTICALS, INC.
AND TEVA PHARMACEUTICALS USA, INC.,
Respondents.

**On Petition For A Writ Of Certiorari
To The United States Court Of Appeals
For The Federal Circuit**

PETITION FOR A WRIT OF CERTIORARI

DONALD R. DUNNER
ALLEN M. SOKAL
FINNEGAN, HENDERSON,
FARABOW, GARRETT &
DUNNER, LLP
901 New York Avenue, N.W.
Washington, D.C. 20001
(202) 408-4014

THEODORE B. OLSON
MARK A. PERRY
Counsel of Record
MATTHEW D. MCGILL
MINODORA D. VANCEA
GIBSON, DUNN & CRUTCHER LLP
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 955-8500

Counsel for Petitioners

QUESTION PRESENTED

Under the judge-made doctrine of "inequitable conduct," a federal court may decline to enforce an otherwise valid patent that was procured through fraud or deceit. *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806 (1945). As befits the punitive nature of the doctrine, this Court has invoked it only in extreme circumstances involving "deliberate," "corrupt," "sordid" and "highly reprehensible" misconduct. Some panels of the Federal Circuit have similarly limited the inequitable conduct doctrine to deliberately planned and carefully executed schemes to defraud, but other Federal Circuit panels—including the majority in this case—have adopted a "sliding scale" under which "less intent" is required as the materiality of an omission or misrepresentation increases. The question presented is:

Whether a court may refuse to enforce an otherwise valid patent on the basis of an inequitable conduct determination premised on a sliding scale between intent and materiality, effectively permitting a finding of fraudulent intent to be predicated on gross negligence.

**PARTIES TO THE PROCEEDING
AND RULE 29.6 STATEMENT**

Pursuant to this Court's Rule 29.6, counsel for petitioners certifies that:

Petitioner Aventis Pharma S.A. has no direct parent companies. All corporations that own 10 percent or more of petitioner Aventis Pharma S.A. are: Aventis Inc., Sanofi-Aventis Europe, Sanofi-Aventis, and sanofi-aventis Amerique du Nord.

Petitioner Aventis Pharmaceuticals Inc. is a subsidiary of Aventis Holdings Inc., which is a subsidiary of Aventis Inc., which is a subsidiary of sanofi-aventis Amerique du Nord. A minority interest in Aventis Pharmaceuticals Inc. is held by Aventis Beteiligungsverwaltung GmbH, which is a wholly-owned subsidiary of Hoechst GmbH, which is a wholly-owned subsidiary of Sanofi-Aventis Europe, which is a wholly-owned subsidiary of Sanofi-Aventis.

TABLE OF CONTENTS

	Page
OPINIONS BELOW	1
JURISDICTION	1
STATUTORY PROVISION INVOLVED.....	1
STATEMENT	2
REASONS FOR GRANTING THE PETITION	10
I. THE DECISION BELOW DISREGARDS THIS COURT'S PRECEDENT AND CONFLICTS WITH TRADITIONAL PRINCIPLES OF EQUITY.....	10
II. THE LOWER COURT DECISIONS ARE IN CONFLICT.....	19
III. THE ISSUE WARRANTS THIS COURT'S ATTENTION	24
CONCLUSION	31

TABLE OF APPENDICES

	Page
APPENDIX A: Opinion of the United States Court of Appeals for the Federal Circuit.....	1a
APPENDIX B: Opinion of the United States District Court for the Central District of California.....	39a
APPENDIX C: Order of the United States Court of Appeals for the Federal Circuit Denying Panel Rehearing and Rehearing En Banc	92a
APPENDIX D: Prior opinion of the United States Court of Appeals for the Federal Circuit.....	95a
APPENDIX E: Prior opinion of the United States District Court for the Central District of California	110a

TABLE OF AUTHORITIES

Page(s)

CASES

<i>Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.</i> , 725 F.2d 1350 (Fed. Cir. 1984)	12, 21, 22, 29
<i>Anza v. Ideal Steel Supply Corp.</i> , 126 S. Ct. 1991 (2006)	26
<i>Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.</i> , 267 F.3d 1370 (Fed. Cir. 2001)	7, 13
<i>Buckman Co. v. Plaintiffs' Legal Committee</i> , 531 U.S. 341 (2001)	27
<i>Burlington Indus. v. Dayco Corp.</i> , 849 F.2d 1418 (Fed. Cir. 1988)	22
<i>Carter-Wallace, Inc. v. Davis Edwards Pharmacal Corp.</i> , 443 F.2d 867 (2d Cir. 1971)	20
<i>Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.</i> , 120 F.3d 1253 (Fed. Cir. 1997)	7
<i>DeLong Corp. v. Raymond Int'l, Inc.</i> , 622 F.2d 1135 (3d Cir. 1980)	20
<i>Digital Equip. Corp. v. Diamond</i> , 653 F.2d 701 (1st Cir. 1981)	20, 21
<i>Dollar Sys., Inc. v. Avcar Leasing Sys., Inc.</i> , 890 F.2d 165 (9th Cir. 1989)	21

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>eBay Inc. v. MercExchange LLC</i> , 547 U.S. 388 (2006).....	15, 17, 18
<i>Eresch v. Braecklein</i> , 133 F.2d 12 (10th Cir. 1943).....	21
<i>Ernst & Ernst v. Hochfelder</i> , 425 U.S. 185 (1976).....	13, 15, 16
<i>Exxon Shipping Co. v. Baker</i> , 128 S. Ct. 2605 (2008).....	30
<i>Ferring B.V. v. Barr Labs., Inc.</i> , 437 F.3d 1181 (Fed. Cir. 2006).....	6, 23
<i>Fid. Fed. Bank & Trust v. Kehoe</i> , 126 S. Ct. 1612 (2006).....	25
<i>FMC Corp. v. Manitowoc Co., Inc.</i> , 835 F.2d 1411 (Fed. Cir. 1987).....	13, 14, 22
<i>GFI, Inc. v. Franklin, Corp.</i> , 265 F.3d 1268 (Fed. Cir. 2001).....	22
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	18
<i>Haloro, Inc. v. Owens-Corning Fibreglas Corp.</i> , 266 F.2d 917 (D.C. Cir. 1959).....	20
<i>Hazel-Atlas Glass Co. v. Hartford-Empire Co.</i> , 322 U.S. 238 (1944).....	<i>passim</i>

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>Hecht Co. v. Bowles</i> , 321 U.S. 321 (1944).....	17
<i>Hoffmann-La Roche, Inc. v. Promega Corp.</i> , 323 F.3d 1354 (Fed. Cir. 2003)	25
<i>Holmes Group, Inc. v. Vornado Air Circulation Sys., Inc.</i> , 535 U.S. 826 (2002).....	21
<i>J.P. Stevens Co. v. Lex Tex, Ltd.</i> , 747 F.2d 1553 (Fed. Cir. 1984)	22
<i>Keystone Driller Co. v. General Excavator Co.</i> , 290 U.S. 240 (1933).....	<i>passim</i>
<i>Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.</i> , 863 F.2d 867 (Fed. Cir. 1988)	22, 23, 24
<i>Kohler v. Kohler & Co.</i> , 319 F.2d 634 (7th Cir. 1963).....	16
<i>Koon v. United States</i> , 518 U.S. 81 (1996)	29
<i>KSR International Co. v. Teleflex Inc.</i> , 127 S. Ct. 1727 (2007).....	18
<i>Lord v. Goddard</i> , 54 U.S. 198 (1851).....	14
<i>Madigan v. Telemarketing Assocs.</i> , 538 U.S. 600 (2003).....	14, 16

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>Magee v. Manhattan Life Ins. Co.</i> , 92 U.S. 93 (1875).....	14
<i>McKesson Info. Solutions, Inc. v.</i> <i>Bridge Med., Inc.</i> , 487 F.3d 897 (Fed. Cir. 2007)	27
<i>MedImmune, Inc. v. Genentech, Inc.</i> , 549 U.S. 118 (2007).....	15
<i>Microsoft Corp. v. AT&T Corp.</i> , 550 U.S. 437 (2007).....	15
<i>Moss v. Riddle & Co.</i> , 9 U.S. 351 (1809).....	14
<i>Myzel v. Fields</i> , 386 F.2d 718 (8th Cir. 1967).....	16
<i>Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.</i> , 984 F.2d 1182 (Fed. Cir. 1993)	5
<i>Parker v. Motorola</i> , 524 F.2d 518 (5th Cir. 1975).....	20
<i>Pfizer, Inc. v. Int'l Rectifier Corp.</i> , 538 F.2d 180 (8th Cir. 1976).....	20
<i>Philadelphia Newspapers, Inc. v. Hepps</i> , 475 U.S. 767 (1986).....	19
<i>Praxair, Inc. v. ATMI, Inc.</i> , 543 F.3d 1306 (Fed. Cir. 2008)	23, 24

TABLE OF AUTHORITIES - Continued

	Page(s)
<i>Precision Instrument Mfg. Co. v. Auto.</i> <i>Maint. Mach. Co.</i> , 324 U.S. 806 (1945) <i>passim</i>	
<i>Reilly v. Pinkus</i> , 338 U.S. 269 (1949)	14
<i>Scott Paper Co. v. Fort Howard Paper Co.</i> , 432 F.2d 1198 (7th Cir. 1970).....	20
<i>Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.</i> , 537 F.3d 1357 (Fed. Cir. 2008)	23, 24
<i>Stoneridge Inv. Partners, LLC v.</i> <i>Scientific-Atlanta, Inc.</i> , 128 S. Ct. 761 (2008).....	26, 30
<i>True Temper Corp. v. CF&I Steel Corp.</i> , 601 F.2d 495 (10th Cir. 1979).....	20
<i>United States v. Am. Bell Tel. Co.</i> , 167 U.S. 224 (1897).....	13
<i>Weinberger v. Romero-Barcelo</i> , 456 U.S. 305 (1982).....	18
<i>Wiscart v. D'Auchy</i> , 3 U.S. 321 (1796)	14
 CONSTITUTIONAL PROVISION	
U.S. Const., art. I, § 8, cl. 8	2

TABLE OF AUTHORITIES - Continued

Page(s)

STATUTES AND REGULATION

28 U.S.C. § 1254(1).....	1
35 U.S.C. § 271(e)(2).....	3
35 U.S.C. § 282	1
37 C.F.R. § 1.56 (2006)	16

OTHER AUTHORITIES

American Bar Association Section of Intellectual Property Law, A Section White Paper: Agenda for 21st Century Patent Reform 18 (2007)	26, 28
Jon W. Dudas, Testimony before the Committee on the Judiciary, U.S. Senate (June 6, 2007)	27
Katherine Nolan-Stevaux, <i>Inequitable Conduct Claims in the 21st Century: Combating the Plague</i> , 20 Berkeley Tech. L. J. 147 (2005)	25
National Association of Manufacturers, Response to the Advisory Commission on Patent Law Reform 10 (1991).....	25

TABLE OF AUTHORITIES - Continued**Page(s)**

National Research Council, A Patent System for the 21st Century (2004) <i>available at http://www.nap.edu/ html/patentsystem/0309089107.pdf</i>	2, 28
Paul M. Janicke, <i>Do We Really Need So Many Mental and Emotional States in United States Patent Law?</i> , 8 Tex. Intell. Prop. L.J. 279 (2000).....	28

PETITION FOR A WRIT OF CERTIORARI

Aventis Pharma S.A. and Aventis Pharmaceuticals Inc. respectfully petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The opinion of the court of appeals (App., *infra*, 1a-38a) is reported at 525 F.3d 1334. The opinion of the district court (App., *infra*, 39a-91a) is reported at 475 F. Supp. 2d 970. A previous opinion of the court of appeals (App., *infra*, 95a-109a) is electronically reported at 176 Fed. Appx. 117, and that of the district court (App., *infra*, 110a-143a) at 390 F. Supp. 2d 936.

JURISDICTION

The judgment of the court of appeals was entered on May 14, 2008. Aventis's timely petition for rehearing was denied on September 25, 2008. App., *infra*, 92a-94a. On November 10, 2008, the Chief Justice extended the time to file this petition until January 23, 2009. 08A417. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

STATUTORY PROVISION INVOLVED

Section 282 of the Patent Act, 35 U.S.C. § 282, provides, in relevant part:

The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

(1) Noninfringement, absence of liability for infringement or unenforceability

STATEMENT

After undertaking a comprehensive review of the American patent system, the National Academies of Science and Engineering concluded that the costs and uncertainties associated with the “inequitable conduct” doctrine counsel its elimination or reform. National Research Council, *A Patent System for the 21st Century* (2004) at 123, <http://www.nap.edu/html/patentsystem/0309089107.pdf>. In reaching this conclusion, the Academies singled out for criticism the very standard at issue in this case: the inference of “intent from the materiality of the information that was withheld.” *Ibid.* This is the standard on which the district court found Aventis guilty of “inequitable conduct,” and, as a result, held Aventis’s patent (for a drug with over \$2 billion in annual U.S. sales) entirely unenforceable. Applying the same standard, the Federal Circuit, in a 2-1 decision, affirmed.

This case presents the Court with an ideal opportunity to clarify the circumstances in which a patent holder may be stripped by a district court of extremely valuable patent rights—a frequently recurring question with profound ramifications for the patent system’s ability to foster and encourage innovation, as required under the constitutional mandate “to promote the Progress of . . . useful Arts.” U.S. Const., art. I, § 8, cl. 8.

1. Aventis invented novel compositions of low molecular weight heparins used in the prevention and treatment of thromboses (*i.e.*, blood clotting), and the process for making these compositions. Aventis applied for a patent, which issued in 1995 after a lengthy review process in which the Patent and Trademark Office carefully scrutinized the nov-

elty and other features of Aventis's claims. See U.S. Patent No. 5,389,618 ("the '618 patent"). Aventis began marketing and selling the compositions in the United States after the United States Food and Drug Administration approved them for sale in 1993 under the name Lovenox®. Lovenox® currently brings in some \$3.1 billion in annual revenue, with U.S. sales exceeding \$2 billion annually.

2. In 2003, Aventis sued respondents Amphastar Pharmaceuticals, Inc. and Teva Pharmaceuticals USA, Inc. under 35 U.S.C. § 271(e)(2) for infringing the '618 patent by submitting an application to the FDA for approval to manufacture and sell generic versions of Lovenox® before the expiration of the patent. Respondents counterclaimed, accusing Aventis of having procured the patent through "inequitable conduct."

Respondents premised their inequitable conduct theory on a simple omission made by Dr. André Uzan, a non-inventor expert whose help on limited matters involving biology was sought because the inventor, Roger Debrie, was a chemist. Dr. Uzan is a distinguished scientist who has been inducted into the French Legion of Honor for his scientific contributions and lifetime dedication to the public health, a recipient of France's highest award for drug discovery (the Galien Research Prize), and an expert with the French Ministry of Public Health and the French Court of Appeals. C.A. App. 1917-28.

Dr. Uzan's involvement with the prosecution of the patent was confined to three isolated instances: providing the information in Example 6 of the '618 patent, a declaration submitted to the PTO nearly three years thereafter, and a second declaration submitted one year after the first. Example 6 was

meant to "illustrate[] the increase in stability" of the invention compared to prior art, App., *infra*, 43a-44a n.3, measured by the increase in plasma half-life (longer half-life means greater stability). In making this comparison in Example 6 (and in his later declarations), Dr. Uzan disclosed the 40 mg and 60 mg dosages of the invention, but failed to disclose that the prior art composition was at 60 mg, and thus that he was making a comparison at different doses.¹

Although it is undisputed that Dr. Uzan knew the dose of the prior composition, there was no evidence indicating that Dr. Uzan intentionally failed to disclose that information. The full prior art study that Dr. Uzan utilized for his comparison does disclose the dose, but the photocopied, unaltered half-

¹ The omission was made in Subsection 3 of Example 6, which provides as follows:

This example illustrates the increase in stability, in vivo, of the mixtures of the invention, expressed by their plasma half-life.

A first pharmacokinetic study was carried out on volunteers between 21 and 30 years of age. . . . The results obtained were as follows:

(1) From the mixtures [of the present invention]:

40 mg dose: in 75% of the cases, the half-life was longer than 4 hours, and was even longer than 4½ hours in approximately 45% of the cases;

60 mg dose: in 75% of the cases, the half-life was longer than 3.7 hours.

(2) . . .

(3) When the product was prepared according to the process described in [the prior art], the half-life was longer than 4½ hours in 17% of the cases.

(4) . . .

App., *infra*, 43a-44a n.3.

life data table (Table III) that he consulted when providing information to the Aventis patent department does not. C.A. App. 1148; 1226.

3. In early 2003, Aventis filed a reissue application for the '618 patent. The PTO reissued the patent on June 14, 2005, with all of the original independent claims, but without Example 6. U.S. Patent No. RE 38,743.

The reissue was granted a day before the district court granted Amphastar's summary judgment motion that the '618 patent was unenforceable. App., *infra*, 38a. In an appeal of this decision, the Federal Circuit affirmed the district court's finding of high materiality, but rejected the finding of deceptive intent as inappropriate on summary judgment. *Id.* at 106a. Under Federal Circuit precedent, Aventis—the party charged with inequitable conduct—was required to demonstrate its innocence in order to prevent a finding of deceptive intent on summary judgment, *i.e.*, it “was required to state specific facts supporting a plausible justification or excuse for its failure to disclose material information.” *Ibid.* (citing *Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.*, 984 F.2d 1182, 1191 (Fed. Cir. 1993)).

Finding that “Aventis has met its burden of setting forth a plausible justification for its failure to disclose material information,” the Federal Circuit reversed and remanded for a trial on inequitable conduct. App., *infra*, 106a. Aventis had explained, among other things, that Dr. Uzan could not have intended to deceive the PTO, because a comparison at different doses was common industry practice and reasonable for clinical reasons. Because the 60 mg dosage for the invented composition caused bleeding in some patients, the 40 mg dosage was therapeuti-

cally preferable for some indications, and thus was the relevant dosage to compare against the 60 mg dosage of the prior art. The district court had rejected this explanation as irrelevant, but the Federal Circuit disagreed, noting that "[t]he reasonableness of the comparison between different dosages is relevant to determining whether the failure to disclose . . . was made with an intent to deceive." *Ibid.*

4. On remand, after a bench trial, the district court found inequitable conduct, holding that respondents had presented evidence that "there has been a failure to supply highly material information and . . . the record establishes that (1) the applicant knew of the information; (2) the applicant knew or should have known of the materiality of the information; and (3) the applicant has not provided a credible explanation for the withholding." App., *infra*, 87a (quoting *Ferring B.V. v. Barr Labs., Inc.*, 437 F.3d 1181, 1191 (Fed. Cir. 2006)).

"Regarding knowledge," the district court held that "there is no debate that Dr. Uzan knew the dose[] used in the [prior study] and at trial, Dr. Uzan admitted to knowing that he was comparing the half-lives . . . at different doses." App., *infra*, 87a-88a. This was undisputed. It also was, however, of limited significance, as it only showed that Dr. Uzan knew that the dosage of the prior composition was 60 mg, not that he realized that he omitted that dosage information.

"Regarding knowledge of materiality," the district court held, "it was obvious that a reasonable [patent examiner] would have considered dosage important." App., *infra*, 87a-88a. This test, however, is the test for materiality, not for intent.

The district court acknowledged that it was effectively eliminating the requirement that a patent applicant have actual knowledge that the omitted information is material and may mislead the PTO, but viewed this as supported by Federal Circuit precedent. "Contrary to Aventis' arguments," the district court explained, "it is well-established that proof of actual knowledge is not always necessarily required" to prove intent to deceive. App., *infra*, 82a n.18. Knowledge that the omitted information is material and may deceive the PTO can simply be presumed instead from materiality: individuals who fail to supply highly material information "should have known" about the information's materiality. *Ibid.* (quoting *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1376 (Fed. Cir. 2001)); *see also ibid.* ("a patentee's failure to appreciate the legal significance of the facts that it failed to disclose d[oes] not absolve it" of a finding of deliberate deception) (citing *Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1256-57 (Fed. Cir. 1997)).

The district court also rejected as "incredible" evidence of Dr. Uzan's subjective belief that the comparison at different but therapeutic doses was reasonable. App., *infra*, 87a.

Based on its two findings of non-disclosure and high materiality, and *Aventis's* failure to prove that it was innocent, the district found "intent to deceive." App., *infra*, 87a (finding inequitable conduct because "[t]he elements of nondisclosure and high materiality have been admitted, and no credible excuse demonstrated").

5. On appeal, a divided panel of the Federal Circuit affirmed, with the majority applying the same sliding-scale standard as the district court. App., *in-*

fra, 18a (“The more material the omission or misrepresentation, the less intent that must be shown to elicit a finding of inequitable conduct”) (citation omitted). Under this standard, the Federal Circuit majority, like the district court, presumed fraudulent intent from materiality, and shifted the burden to Aventis to clearly and convincingly prove the absence of such intent.

For example, critical to respondents’ charge of inequitable conduct was their claim that the comparison discussed in Example 6 and in Dr. Uzan’s declarations was meant to show not only the superior stability of the invention, but also a compositional difference between the invention and prior art—in which case a comparison at different doses would have been improper. Example 6 nowhere mentions or discusses compositional difference, and by its very own terms states that it is meant to address the superior “stability” of the invention, *i.e.*, a property of the invention. App., *infra*, 5a (“This example illustrates the increase in stability, *in vivo*, of the mixtures of the invention”). Instead of requiring respondents to clearly and convincingly prove that Example 6 *was meant* to address a compositional difference, the panel majority turned the burden of proof on its head, requiring instead that Aventis clearly and convincingly show that Example 6 *was not meant* to address compositional difference: “Nothing in example 6 suggests that the half-life comparison was designed to show only [superior stability] and not [a compositional difference].” *Id.* at 23a.

In dissent, Judge Rader criticized the improper “[m]erging [of] intent and materiality” under the majority’s sliding-scale standard, and highlighted several previous cases in which the Federal Circuit had “emphasized materiality almost to the exclusion of

[the] intent requirement." App., *infra*, 33a. According to Judge Rader, Dr. Uzan's omission, even if material and negligent, could not reasonably support an inference of "culpable intent to deceive," a finding which is reserved only to "the most extreme cases of fraud and deception." *Id.* at 31a.

Key to Judge Rader's analysis was the absence of any evidence that Dr. Uzan knowingly omitted the information. See App., *infra*, 35a ("To make it clear, Dr. Uzan did not attempt to conceal data that were otherwise present. Rather he just submitted the study without adding to the disclosure."). Furthermore, the absence of a dosage in subsection 3 of Example 6, given its presence in subsections 2 and 4, was "blatantly obvious." *Id.* at 36a. "[I]f Dr. Uzan had intended to deceive the USPTO, he would not have made this omission so conspicuous." *Ibid.* In addition, Judge Rader found it simply hard to believe, absent clear evidence to the contrary, that a "world-class scientist would . . . risk his reputation and tarnish his brilliant career for . . . a patent for an invention in which he was not even involved." *Ibid.*

Judge Rader also pointed out that, aware of the allegations of inequitable conduct brought by respondents, the PTO nonetheless reissued the patent, including all original independent claims, without Example 6 and without reliance on the challenged comparisons of the half-life/stability data. According to Judge Rader, this rendered both materiality and intent "suspect." App., *infra*, 38a.

Aventis petitioned for en banc review, arguing (among other things) that the sliding-scale standard "effectively dispens[es] with the separate element of 'intent' in inequitable conduct cases involving a ma-

terial omission.” Pet. C.A. Reh’g Br. 1. The Federal Circuit declined the invitation to clean its own house.

REASONS FOR GRANTING THE PETITION

The courts below invoked the “inequitable conduct” doctrine to render unenforceable an extremely valuable patent twice granted by the responsible agency of the executive branch (under authority conferred by Congress pursuant to a constitutional mandate), thereby depriving Aventis of the exclusive rights to its invention. And the lower courts did so without requiring the type of outright perjury and other extreme misconduct to which this Court has reserved the doctrine. That was wrong.

As Judge Rader recognized in his dissent, decisions like this one impair the effective functioning of the patent system. A lax standard for inequitable conduct not only encourages unwarranted litigation and threatens investments in research and development, but also interferes with the ability of the PTO to effectively examine patent applications by encouraging applicants to deluge the PTO with hundreds of minimally relevant references.

Numerous judges, scholars, practitioners and national organizations have recommended abolition or reform of the inequitable conduct doctrine. This Court has not revisited the doctrine in more than 60 years, the lower court decisions are in conflict, and the internally divided Federal Circuit has been unable to rein in the unwarranted expansion of the doctrine. It is time.

I. THE DECISION BELOW DISREGARDS THIS COURT’S PRECEDENT AND CONFLICTS WITH TRADITIONAL PRINCIPLES OF EQUITY

A. In three—and only three—cases, this Court has refused to enforce a patent for inequitable conduct in its prosecution or enforcement. Each in-

involved extreme circumstances of "deliberate," "corrupt," "sordid," and "highly reprehensible" fraudulent conduct intentionally committed by the patent holder during prosecution or enforcement of the patent.

Keystone Driller Co. v. General Excavator Co., 290 U.S. 240 (1933), for example, involved a "corrupt transaction" that was "highly reprehensible," in which the patent owner obtained, in exchange for "valuable considerations," both a false affidavit and false deposition testimony "to keep secret the details of [a] prior use" which would have been "sufficient to cast doubt upon the validity of the patent." *Id.* at 243-44.

Hazel-Atlas Glass Co. v. Hartford-Empire Co., 322 U.S. 238 (1944), involved the grant of "[e]quitable relief against [a] fraudulent judgment[]." *Id.* at 248. There, the patentee paid generously for the fabrication of an "ostensibly disinterested" publication describing the claimed invention as a "remarkable advance in the art," which was submitted to the PTO and relied on by the patentee in the Court of Appeals. *Id.* at 240, 248. The purported author was also paid to submit a false affidavit. This "sordid story," *id.* at 243, "a deliberately planned and carefully executed scheme to defraud not only the Patent Office but the Circuit Court of Appeals," *id.* at 245, came out only after judgment had been entered. Based upon "settled equitable principles," the Court ordered the judgment set aside. *Id.* at 247.

And *Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.*, 324 U.S. 806 (1945), involved a situation in which "the history of the patents" was "steeped in perjury and undisclosed knowledge of perjury," *id.* at 816, including false testimony by Larson (the patentee) in an interference proceeding, and the discovery of Larson's per-

jury by Automotive, which used that information to blackmail Larson into assigning his patent rights to Automotive and agreeing never to contest the resulting patent. The result of these actions was that Automotive, which never revealed the patent's fraudulent ancestry to the Patent Office, was issued a patent with claims broader than those to which Automotive was actually entitled. Explaining that "he who comes into equity must come with clean hands" (i.e., to have acted "without fraud or deceit"), the Court declined to enforce the patent. *Id.* at 814-15.²

Notwithstanding this Court's careful confining of inequitable conduct to "deliberately planned and carefully executed scheme[s] to defraud," *Hazel-Atlas*, 322 U.S. at 245, the Federal Circuit has permitted, in this case and others, a lesser showing of intent in cases in which the materiality of the alleged improper conduct is high. App., *infra*, 18a ("The more material [a patent applicant's] omission or misrepresentation, the less intent that must be shown"). Under this sliding scale of intent and materiality, high materiality "necessarily" disposes of the need to prove a deliberate deception as required under this Court's precedent: a high showing of materiality "would necessarily create an inference that its non-disclosure was 'wrongful.'" *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1363 (Fed. Cir.

² Unlike *Keystone* and *Hazel-Atlas*, *Precision Instrument* (like this case), involved conduct that occurred solely before the PTO, and not in the action before the court. The standard applied in *Keystone* and *Hazel-Atlas*, on which *Precision Instrument* itself relied, was nevertheless applicable: To the extent that courts may punish allegedly fraudulent conduct that occurred solely before a co-equal branch of the government, the standard should be no less than that applicable to an alleged fraud on the court.

1984). A knowing deception is thus presumed from the mere fact that highly material information was omitted, under the justification that "he who failed to supply highly material information *should have known* about the information's materiality." App., *infra*, 81a (quoting *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1376 (Fed. Cir. 2001)) (emphasis added). But, as early as 1897, this Court recognized that one challenging a patent as fraudulently or wrongfully obtained must prove fraud by "clear and convincing" evidence, and the courts may not "assume[] the existence of a knowledge which no one had; of an intention which is not shown." *United States v. Am. Bell Tel. Co.*, 167 U.S. 224, 259 (1897). The Federal Circuit engages in precisely such an assumption under its "should have known" standard.

The non-disclosure of material information is a necessary but not sufficient element of fraud or inequitable conduct. The complainant must also prove that the material information was *intentionally* withheld. The Federal Circuit, by presuming intent from materiality, effectively does away with the separate requirement for intent, permitting a finding of intent to be predicated on strict liability for a material omission. That the patent holder is then allowed to prove his innocence (a "credible" explanation for the non-disclosure) does not cure the infirmity of this standard. Indeed, where, as here, a defending party is given the ability to show a "reasonable" explanation for a non-disclosure which would otherwise trigger strict liability, this Court has deemed the standard to be one of "negligence." *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 208 (1976). And the Federal Circuit itself has couched the "should have known" standard in terms of gross negligence. See *FMC Corp. v. Manitowoc Co., Inc.*, 835 F.2d 1411, 1415 (Fed. Cir. 1987) ("an applicant who knew of the art or information cannot intentionally avoid

learning of its materiality through gross negligence, *i.e.*, it may be found that the applicant ‘should have known’ of that materiality”); *see also id.* at n.9 (“‘gross negligence’ was seen as occurring when a reasonable person ‘should have known of the materiality of a withheld reference’”) (citation omitted).

But neither negligence nor strict liability can sensibly be reconciled with the deliberately fraudulent conduct required by this Court’s patent decisions. Those decisions limit the inequitable conduct doctrine to deliberate schemes to defraud involving extreme circumstances of outright perjury (*Precision Instrument*), or intentionally false and fabricated evidence and testimony (*Hazel-Atlas* and *Keystone*)—not mere negligent failures to disclose.

B. Nor can the Federal Circuit’s sliding scale be reconciled with the Court’s decisions involving fraud or inequitable conduct allegations in other areas of the law. For more than two centuries, the Court has repeatedly reiterated that “[f]raud means an intention to deceive.” *Lord v. Goddard*, 54 U.S. 198, 211 (1851); *see also Wiscart v. D’Auchy*, 3 U.S. 321, 330 (1796) (“fraud must always principally depend upon the *quo animo*,” *i.e.*, on the animus or bad faith); *Moss v. Riddle & Co.*, 9 U.S. 351, 357 (1809) (stating that “[f]raud consists in the intention”); *Magee v. Manhattan Life Ins. Co.*, 92 U.S. 93, 98-99 (1875) (“To constitute fraud, the intent to deceive must clearly appear. The concealment must be wilful and intentional.”) (citation omitted); *Reilly v. Pinkus*, 338 U.S. 269, 275 (1949) (findings of fraud are justified by representations “made with intent to deceive”); *Madigan v. Telemarketing Assocs.*, 538 U.S. 600, 621 (2003) (“the gravamen of the fraud action . . . is particular representations made with intent to mislead”).

In no fraud case has this Court ever indicated that intent to deceive could be judged on a sliding scale, with gross negligence sufficient in cases of high materiality. To the contrary, *Ernst & Ernst* explicitly precludes a gross negligence approach. 425 U.S. at 191 n.7, 197, 201, 215 (holding that securities fraud requires proof of “intent to deceive,” and that this excludes a gross negligence theory of liability).

The relevance of these non-patent cases is beyond serious dispute. The common theme of this Court’s recent patent decisions is that patent cases are subject to the same general principles as other claims brought under federal common law or statutory regimes. See *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007); *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118 (2007), *eBay Inc. v. MercExchange LLC*, 547 U.S. 388 (2006). If this case had been brought as a fraud case under other federal law regimes, it would not have survived even a motion to dismiss. Even accepting the factual predicates relied on by the courts below (namely, that Dr. Uzan knew the dosage information, that the dosage information was highly material, that Dr. Uzan “should have known” of its materiality, and that Dr. Uzan could not “credibly” prove his innocence (App., *infra*, 87a)), there is still no legally sufficient basis under this Court’s precedent to find intent to deceive.

Under that precedent, the test for deception is not whether the defendant “should have known” that an omission was material and misleading, as the courts below inquired. App., *infra*, 82a. Nor is it whether the allegedly defrauded party would have considered the omitted information important (*id.* at 87a-88a), which is the test for materiality. Nor is it whether the accused declarant has proved his innocence. *Ibid.* It is whether the complainant has shown that the material and misleading nature of an

omission was known to the declarant himself and that the omission was made with a misleading purpose. As the Court explained in *Madigan*, “[f]alse statement alone does not [result in] fraud liability.” 538 U.S. at 621. Rather, “the complainant must show that the defendant made a false representation . . . knowing that the representation was false” and, further, “with the intent to mislead the listener.” *Ibid.* (emphasis added).

This Court’s requirement that the misleading nature of an omission be known to the defendant is flatly at odds with the holding below that “proof of actual knowledge is not always necessarily required” to prove inequitable conduct. App., *infra*, 81a-82a. Two of the cases criticized in *Ernst & Ernst* on the ground that they set too low a standard for fraud, 425 U.S. at 193 n.12, had explicitly held, as in this case, that “knowledge of the falseness of the impression produced by the statements or omissions made[] is not required” to show fraud. See *Myzel v. Fields*, 386 F.2d 718, 734-35 (8th Cir. 1967); *Kohler v. Kohler & Co.*, 319 F.2d 634, 637-38 (7th Cir. 1963). The PTO has similarly recognized that a standard requiring actual knowledge is the appropriate one for patent law. See 37 C.F.R. § 1.56 (2006) (imposing on a declarant the “duty to disclose to the [PTO] all information known to that individual to be material to patentability as defined in this section”) (emphasis added).³

³ To be sure, as respondents have claimed, the intentionality of certain conduct can be inferred from circumstantial evidence. For example, if the version of Table III in the study consulted by Dr. Uzan had included the dosage information, but Dr. Uzan had removed it from the version provided to the PTO, this deletion would tend to suggest a knowing omission (albeit not necessarily a purposive one). But no such facts tending to prove an intentional removal of information are present here: the photo-

C. The Federal Circuit's rigid imposition of the drastic remedy of unenforceability—regardless of the absence of extraordinary circumstances, the presence of alternative remedies, and the impact on the public interest—also contravenes well-settled equitable principles, and this Court's decisions interpreting them.

Equitable principles require inquiry into the inadequacy of legal remedies before equitable relief is awarded. *eBay*, 547 U.S. at 391. In defiance of this well-known threshold for equitable relief, the patent was held unenforceable in this case before the court decided whether respondents would have been entitled to relief on their legal defenses of non-infringement and invalidity. App., *infra*, 32a.

Moreover, the Federal Circuit's one-size-fits-all remedy of "unenforceability" as a punishment for inequitable conduct involving broad ranges of culpability does not comport with the equitable nature of the doctrine. "The essence of equity jurisdiction has been the power of the Chancellor to do equity and to mould each decree to the necessities of the particular case. Flexibility rather than rigidity has distinguished it." *Hecht Co. v. Bowles*, 321 U.S. 321, 329 (1944). In equity remedies are tailored to fit the circumstances of the particular case, with the harshest remedies chosen in the extraordinary circumstances in which they are the "only means" to safeguard the

[Footnote continued from previous page]

copied, unaltered half-life data table (Table III) that Dr. Uzan consulted and provided to the PTO did not contain the dosage information. As Judge Rader explained in his dissent, "Dr. Uzan did not attempt to conceal data that were otherwise present. Rather he just submitted the study without adding to the disclosure." App., *infra*, 35a.

public interest sought to be protected, and less invasive means selected otherwise. *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312-15 (1982); see also *eBay*, 547 U.S. at 392 (the harshest remedies do not “automatically” follow a determination that a violation has been committed). For example, in *Romero-Barcelo*, the Court held that the goal of ensuring compliance with the permitting requirement imposed by the statute could be achieved by remedies other than an injunction, such as penalties or fines. 456 U.S. at 312-15.

Similarly here, absent the extraordinary circumstance of deliberate fraud resulting in the issuance of an otherwise invalid patent, unenforceability is not the “the only means of” remedying a non-disclosure and “ensuring compliance” with disclosure obligations, as courts could impose “fines” and other “penalties,” *Romero-Barcelo*, 456 U.S. at 314, including a weakened presumption of validity, see *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1745 (2007). The Federal Circuit, however, automatically imposes the extraordinary remedy of unenforceability even absent the extraordinary circumstances to which this Court has reserved it in *Precision Instrument*, *Keystone*, and *Hazel-Atlas*.

Nor does the Federal Circuit follow the traditional principle that “[i]n exercising their sound discretion, courts of equity should pay particular regard for the public consequences” of the remedy they impose. *Romero-Barcelo*, 456 U.S. at 312. In fact, as in this case, the Federal Circuit and the lower courts impose the extraordinary remedy of unenforceability without *any* analysis of the impact on the public interest, including the constitutional purpose of promoting innovation. See *Graham v. John Deere Co.*, 383 U.S. 1, 6 (1966) (“promot[ing] the Progress of . . .

useful Arts' . . . is the standard expressed in the Constitution and it may not be ignored").

When life-saving innovations and billions of dollars in annual revenue and research and development are at stake (as here), the need to calibrate the interest in ensuring non-misleading disclosures to the PTO with the constitutional interest in promoting innovation is heightened—both in setting the standard for inequitable conduct and in remedying it. In other balancing situations involving similar burden-shifting, this Court has tipped the scales in favor of the constitutional interest. *See, e.g., Philadelphia Newspapers, Inc. v. Hepps*, 475 U.S. 767, 778 (1986) (although placing the burden on the complainant to prove the falsity of defamatory speech "will insulate from liability some speech that is false," "the Constitution requires us to tip [the scales] in favor of protecting true speech" because otherwise there "would be some cases in which defendants could not bear [the burden to prove their innocence] despite the fact that the speech is in fact true"). And in *Precision Instrument, Keystone*, and *Hazel-Atlas*, this Court has similarly tipped the balance in favor of the constitutional interest by reserving inequitable conduct to exceptional circumstances. In contrast, the Federal Circuit has not only failed to tip the scales in favor of the constitutional interest—it has failed even to consider that interest.

II. THE LOWER COURT DECISIONS ARE IN CONFLICT

Although this Court has emphasized that fraud and inequitable conduct require a deliberate deception, the lower appellate courts have split regarding the requisite level of culpability, and that division of authority is reflected in the Federal Circuit's own caselaw.

A. Before the creation of the Federal Circuit in 1982, at least five regional circuits rejected a gross negligence predicate for fraud or inequitable conduct. See *Scott Paper Co. v. Fort Howard Paper Co.*, 432 F.2d 1198, 1204 (7th Cir. 1970) (finding that the equitable defense of "[u]nclean hands can be asserted only if there has been a deliberate misrepresentation in the [PTO]"); *Carter-Wallace, Inc. v. Davis Edwards Pharmacal Corp.*, 443 F.2d 867, 882 (2d Cir. 1971) ("in order for nondisclosure to constitute inequitable misconduct there must be something more than negligence"); *Parker v. Motorola*, 524 F.2d 518, 535 (5th Cir. 1975) ("mere negligent omissions or misstatements to the Patent Office do not provide sufficient basis for a finding of fraud"); *Pfizer, Inc. v. Int'l Rectifier Corp.*, 538 F.2d 180, 186 (8th Cir. 1976) (same); see also *Haloro, Inc. v. Owens-Corning Fibreglas Corp.*, 266 F.2d 918, 919 (D.C. Cir. 1959) (reversing finding of inequitable conduct because the challenged misrepresentations did not involve the type of deliberate fraud and exceptional circumstances at issue in *Precision Instruments* and *Hazel-Atlas*).

Three other circuits premised inequitable conduct on gross negligence, at least in cases of high materiality. *DeLong Corp. v. Raymond Int'l, Inc.*, 622 F.2d 1135, 1146 (3d Cir. 1980) (inequitable conduct requires "at least a gross negligence or recklessness in misrepresenting the truth"); *True Temper Corp. v. CF&I Steel Corp.*, 601 F.2d 495, 502 (10th Cir. 1979) (rejecting "intentional fraud" as the "only ground for withholding enforcement of patents," and allowing unenforceability "where misrepresentations are made in an atmosphere of gross negligence as to their truth") (internal quotation and citation omitted); *Digital Equip. Corp. v. Diamond*, 653 F.2d 701, 716 (1st Cir. 1981). Of the three, the First Circuit is the inventor of the sliding scale. It held, just like

American Hoist (the Federal Circuit case adopting the sliding scale in 1984), that "a lesser showing of [materiality] may suffice when an intentional scheme to defraud is established, whereas a greater showing of the [materiality] would necessarily create an inference that its nondisclosure was 'wrongful.'" *Digital Equip.*, 653 F.2d at 716.

Given the Federal Circuit's inability to resolve this conflict, the split between the regional circuits addressing the inequitable conduct issue presents a compelling case for this Court's review. Not only do regional circuit decisions identify *potent* cases that "merit this Court's attention," see *Holmes Group, Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826, 839 (2002) (Stevens, J., concurring), but as inequitable conduct is an issue of federal common law, the conflict between the circuits has repercussions beyond the confines of patent law. Cf. *Dollar Sys., Inc. v. Avcar Leasing Sys., Inc.*, 890 F.2d 165, 173 (9th Cir. 1989) (holding, outside the patent context, that "grossly negligent" conduct "did not rise to the level of misconduct necessary for the application of the unclean hands doctrine" because "[b]ad intent is the essence of the defense of unclean hands"); *Eresch v. Braecklein*, 133 F.2d 12, 14 (10th Cir. 1943) (it is "well-settled" "that it is only fraud or willful misconduct which bars one from recovering in a court of equity under the [inequitable conduct] maxim, 'He who comes into equity must come with clean hands'").

B. The split among the regional circuits is mirrored in the Federal Circuit's own decisions, which are deeply divided between those requiring actual proof of intent to deceive, and those merely presuming it under the sliding-scale standard.

Soon after its creation in 1982, the Federal Circuit adopted the First Circuit's sliding scale of intent and materiality, under which a high showing of ma-

teriality “would necessarily create an inference that its nondisclosure was ‘wrongful.’” *Am. Hoist*, 725 F.2d at 1363. Around the same time, the Federal Circuit also adopted a “gross negligence” standard for finding intent to deceive. *J.P. Stevens Co. v. Lex Tex, Ltd.*, 747 F.2d 1553 (Fed. Cir. 1984).

Within a few years, inequitable conduct had become a “plague” on patent holders and the court system. *Burlington Indus. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988). In response, the en banc Federal Circuit tried to clarify that inequitable conduct was not a remedy for every mistake, blunder, or fault in the patent procurement process. *Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) (en banc).

Although *Kingsdown* purported to overrule the “gross negligence” standard, it did not discard the sliding scale adopted in 1984 by its *American Hoist* decision. As a result, while paying lip-service to prior decisions that reject gross negligence and reciting the principle that “materiality does not presume intent,” courts (as in this case) nonetheless proceed to apply a radically different standard—the sliding scale, with its “necessary[]” inference of intent from high materiality. And, unable to recognize that this “should have known” standard is logically incompatible with its rejection of gross negligence, the Federal Circuit has created a morass of conflicting, confusing, and contradictory decisions. Compare *FMC Corp. v. Manitowoc Co., Inc.*, 835 F.2d 1411, 1415 (Fed. Cir. 1987) (equating the “should have known” standard with gross negligence), with *GFI, Inc. v. Franklin, Corp.*, 265 F.3d 1268, 1274 (Fed. Cir. 2001) (“[M]ateriality does not presume intent, which is a separate and essential component of inequitable conduct”) (internal quotation and citation omitted). Thus, some panels understand that intent

and materiality are separate elements, which must *both* be proven *before* any balancing or burden-shifting is undertaken; others (like the majority in this case) deem high materiality sufficient to establish a *prima facie* case of intent.

In light of this decisional rift, the sliding scale's conflation of materiality and intent is (unsurprisingly) deemed improper by some on the Federal Circuit bench. For example, Judge Newman has noted that the "should have known" standard "replac[es] the need for evidence of intent" with "a positive inference of wrongdoing," and results in decisions in which the court "infers material misrepresentation, infers malevolent intent, presumes inequitable conduct, and wipes out a valuable property right . . . on the theory that the inventor 'should have known' that something might be deemed material." *Ferring*, 437 F.3d at 1196 (Newman, J., dissenting). Judge Rader similarly criticized the improper "[m]erging [of] intent and materiality" caused by the sliding scale, considering that the Federal Circuit has often "emphasized materiality almost to the exclusion of [the] intent requirement." App., *infra*, 33a. Judge Lourie has expressed similar views. *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1329 (Fed. Cir. 2008) (Lourie, J., dissenting).

Despite its internal critics and numerous calls for reform, the Federal Circuit has consistently refused to overrule the sliding scale (and its "should have known" test for highly material omissions) en banc. Cases such as *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357 (Fed. Cir. 2008), in which the Federal Circuit scrupulously followed *Kingsdown* and reiterated that materiality and intent are separate elements that must *both* be proven as part of a complainant's *prima facie* case, before

any burden-shifting is undertaken, cannot overrule the sliding scale unless they are taken en banc. They were not. See 2008 U.S. App. LEXIS 25385 (Fed. Cir. Oct. 22, 2008) (denying en banc review in *Star Scientific*). Indeed, no more than a month after the *Star Scientific* decision, the Federal Circuit in *Praxair* again deemed high materiality sufficient to establish intent. 543 F.3d at 1329 (Lourie, J., dissenting) (arguing that the standard applied by the majority and the district court improperly “conflat[ed] intent with materiality”).

This case, therefore, does not represent a mere isolated deviation from *Kingsdown*’s disapproval of a gross negligence standard for inequitable conduct. It follows an equally applicable and long-standing precedent, and highlights the entrenched and deepening rift in the Federal Circuit that leaves rights to inventions worth billions of dollars entirely at the mercy of the Federal Circuit’s panel selection process. If left uncorrected, this rift will continue to sow substantial confusion in an area of law where settled and clear standards are paramount and (ironically) the *raison d’être* for the Federal Circuit.

III. THE ISSUE WARRANTS THIS COURT’S ATTENTION

A. Inequitable conduct is asserted in virtually every patent infringement case. At the appellate level alone, the Federal Circuit has decided no fewer than 42 inequitable conduct cases over the past three years. Inequitable conduct (or unclean hands) charges are also common outside the patent context, further underscoring the need for this Court’s guidance regarding the circumstances and level of culpability that justify application of the doctrine.

This recurring question is of far-reaching national importance. The reflexive resort to charges of inequitable conduct without regard to actual culpability is a “plague” on litigants and the courts. *Hoffmann-La Roche, Inc. v. Promega Corp.*, 323 F.3d 1354, 1381 (Fed. Cir. 2003) (Newman, J., dissenting) (commenting on the “New Plague”); *see also* National Association of Manufacturers, Response to the Advisory Commission on Patent Law Reform 10 (1991) (viewing “inequitable conduct” allegations—which “are made with a distressing frequency, litigated at enormous cost, and contribute enormously to the uncertainty of inventors seeking to enforce their rights”—as a “plague”).

Although many inequitable conduct charges may not ultimately succeed, *see* Katherine Nolan-Stevaux, *Inequitable Conduct Claims in the 21st Century: Combating the Plague*, 20 Berkeley Tech. L. J. 147, 148-49 (2005), the Federal Circuit’s diluted standard for “intent” is far from harmless. A large part of the harm is inflicted by costly discovery, or trials, on unwarranted charges of inequitable conduct that could have been abated on a dispositive motion had this Court’s *scienter* requirement been followed. The harm is even greater when inequitable conduct claims prevail even though premised on mere proof of materiality and inferences of intent from materiality, in contravention of this Court’s teachings. The “enormous” harm in this case—involving patent rights in a drug with *billions* of dollars in annual sales—is itself “a strong factor in deciding whether to grant certiorari.” *Fid. Fed. Bank & Trust v. Kehoe*, 126 S. Ct. 1612 (2006) (Scalia, J., concurring in the denial of certiorari).

The uncertainty and expense imposed by the expansive application of the “inequitable conduct” doc-

trine are further magnified by the Federal Circuit's elimination of another meaningful check on unwarranted claims of fraud: the reliance (*i.e.*, causation) requirement normally applicable to claims of fraud and to equitable claims akin to fraud, such as promissory estoppel. *Stoneridge Inv. Partners, LLC v. Scientific-Atlanta, Inc.*, 128 S. Ct. 761, 769 (2008); *Anza v. Ideal Steel Supply Corp.*, 126 S. Ct. 1991 (2006). Without the need for reliance, a non-intentional misrepresentation whose culpability is presumed from its materiality can give rise to inequitable conduct even if it is not the "but-for" cause for the examiner's approval of the patent. But even if it were appropriate to punish patentees for *intentional* misrepresentations despite the absence of some showing of causation (and Aventis submits it is not), any rationale for such punishment disappears when the misrepresentation is not shown to be deliberate.

The question presented is extraordinarily important not only to every person and company affected by weak or baseless assertions of inequitable conduct, but also to the effective functioning of our patent system. The proliferation of inequitable conduct charges gives patent applicants strong incentives to inundate the PTO with information in the hopes of forestalling a later inequitable conduct charge. Ironically, this decreases patent quality: Applicants "disclose too much prior art for the PTO to meaningfully consider, and do not explain its significance, all out of fear that to do otherwise risks a claim of inequitable conduct." American Bar Association Section of Intellectual Property Law, A Section White Paper: Agenda for 21st Century Patent Reform 18 (2007).

The information overload resulting from the hundreds of (barely relevant) cited references interferes with efforts to produce higher quality examinations

and contributes to the PTO's record workload crisis. As a recent Director of the PTO has emphasized, the inequitable conduct doctrine "has a perverse effect" on the actions of applicants before the PTO, "discourag[ing] many applicants from conducting a search and lead[ing] others to be indiscriminate in the information they submit." Jon W. Dudas, Testimony before the Committee on the Judiciary, U.S. Senate (June 6, 2007). That "[a]pplicants . . . have an incentive to submit a deluge of information that the [agency] neither wants nor needs, resulting in additional burdens on the [agency's] evaluation of an application," counsels not only against allowing a private right of action for fraud on an agency, as this Court held in *Buckman Co. v. Plaintiffs' Legal Committee*, 531 U.S. 341, 351 (2001), but also against allowing inequitable conduct claims to proceed in any but the most extreme cases of fraud and deception.

The ease with which billion-dollar patent rights can be obliterated under the Federal Circuit's weak standard for intent also erodes confidence in the patent system. Property owners value certainty and Congress intended the Federal Circuit to promote that kind of certainty. If the business community loses faith in the enforceability of patents, it is unlikely to continue to invest in research and development, producing a chilling effect on the "progress of the useful arts" that the patent system was meant to promote. The consequences from decreased innovation are especially severe in the pharmaceutical industry, on which the American public depends for disease-curing, life-saving innovations.

In light of these and other considerations, the Federal Circuit's "return[] to the 'plague' of encouraging unwarranted charges of inequitable conduct" (*McKesson Info. Solutions, Inc. v. Bridge Med., Inc.*,

487 F.3d 897, 926-27 (Fed. Cir. 2007) (Newman, J., dissenting)), has attracted calls for reform. For example, one national organization advocates limiting the doctrine "to cases where a fraud resulted in the PTO issuing one or more invalidated claims," which is tantamount to the adoption of a "reliance" requirement. American Bar Association Section of Intellectual Property Law, A Section White Paper: Agenda for 21st Century Reform 18 (2007). *See also*, e.g., Paul M. Janicke, *Do We Really Need So Many Mental and Emotional States in United States Patent Law?*, 8 Tex. Intell. Prop. L.J. 279, 292 (2000) (arguing that the "remedy is worse than the illness" and that, because true inequitable conduct is rare, this does "not seem to justify putting every patentee through the cost and jeopardy of a trial on inequitable conduct").

And, after undertaking a comprehensive review of the patent system, the National Academies of Science and Engineering similarly concluded in 2004 that the costs and uncertainties associated with application of the inequitable conduct doctrine counsel its "elimination" or reform. National Research Council, *A Patent System for the 21st Century* (2004) at 123, <http://www.nap.edu/html/patentsystem/0309089107.pdf>. In reaching this conclusion, the Academies singled out for criticism the very standard at issue here: the Federal Circuit's practice of inferring "intent from the materiality of the information that was withheld." *Ibid.*

B. This case, which comes to the Court on final judgment after a bench trial, presents a sound vehicle for shaping the inequitable conduct doctrine. The district court held unenforceable a patent twice granted by the PTO, which provides more than \$2 billion in annual revenue. Essential to that holding

was the Federal Circuit's sliding-scale test, and its "should have known" standard for inferring intent from high materiality. *Aventis* argued that respondents failed to prove the requisite "intent to deceive," including "actual knowledge." App., *infra*, 82a. "Contrary to *Aventis*' arguments," the district court explained, "it is well-established that proof of actual knowledge is not always necessarily required" to prove intent to deceive; rather, individuals who fail to supply highly material information "should have known" about the information's materiality." *Ibid.* (citation omitted).

The district court also found that *Aventis* failed to prove a credible explanation for the non-disclosure, but the sliding scale was nonetheless essential to its holding. In fact, it is precisely because of the sliding scale that the district court shifted the burden to *Aventis* to prove a credible explanation once high materiality was shown, instead of requiring respondents to make a prima facie case of intent. App., *infra*, 87a (finding inequitable conduct because "[t]he elements of nondisclosure and high materiality have been admitted, and no credible excuse demonstrated"); see also, e.g., *Am. Hoist*, 725 F.2d at 1363 (a high showing of materiality "would necessarily create an inference that its nondisclosure was 'wrongful'").

In affirming, the panel majority applied a deferential standard of review and the same sliding scale applied by the district court. No such deference is due, however, should this Court reject the sliding scale. *Koon v. United States*, 518 U.S. 81, 100, 116 (1996) ("A district court by definition abuses its discretion when it makes an error of law"). Therefore, this case cleanly presents the legal issue of whether a court may refuse to enforce an otherwise valid pat-

ent based on a finding of inequitable conduct that lowers the intent requirement as the materiality of an omission or misrepresentation increases, effectively permitting a finding of intent to deceive based on nothing more than gross negligence. If the question presented is resolved in Aventis's favor, Aventis will be entitled to judgment on respondents' counterclaim, or, at minimum, to a redetermination of its culpability under the correct standard on remand.

The decision below disregards the careful confines that the Court has imposed on the inequitable conduct doctrine and exacerbates a troubling division of authority that has attracted widespread calls for reform. This Court has repeatedly granted certiorari to adjust the lower courts' expansion of judicially created doctrines. See *Exxon Shipping Co. v. Baker*, 128 S. Ct. 2605 (2008); *Stoneridge*, 128 S. Ct. at 761. The inequitable conduct doctrine in patent cases is judge-made in every sense, and can (and should) be shaped by the Judiciary to conform to the broader policies of the Progress Clause and the Patent Act, as well as the general run of federal law. This issue will not benefit from further percolation in the circuits. The split in the lower courts and within the Federal Circuit itself is deep and mature, and the Federal Circuit has exhibited a steadfast unwillingness to revisit the issue en banc. Four decades of confusion are enough. The question presented is ripe—indeed overdue—for this Court's review.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

DONALD R. DUNNER

ALLEN M. SOKAL

FINNEGAN, HENDERSON,

FARABOW, GARRETT &

DUNNER, LLP

901 New York Avenue, N.W.

Washington, D.C. 20001

(202) 408-4014

January 23, 2009

THEODORE B. OLSON

MARK A. PERRY

Counsel of Record

MATTHEW D. MCGILL

MINODORA D. VANCEA

GIBSON, DUNN & CRUTCHER LLP

1050 Connecticut Avenue, N.W.

Washington, D.C. 20036

(202) 955-8500

APPENDIX

APPENDIX A

**AVENTIS PHARMA S.A. and Aventis
Pharmaceuticals, Inc., Plaintiffs-
Appellants,**

v.

**AMPHASTAR PHARMACEUTICALS,
INC., Defendant-Appellee,**

and

**Teva Pharmaceuticals USA, Inc.,
Defendant-Appellee.**

No. 2007-1280.

United States Court of Appeals,
Federal Circuit.

May 14, 2008.

* * *

Donald R. Dunner, Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., of Washington, DC, argued for plaintiffs-appellants. With him on the brief were Allen M. Sokal, Bryan C. Diner, and Esther H. Lim, of Washington, DC, and Michael J. McCabe II, of Atlanta, GA.

Jan P. Weir, Stradling Yocca Carlson & Rauth, of Newport Beach, CA, argued for defendant-appellee Amphastar Pharmaceuticals, Inc. With him on the brief were Steven M. Hanle and Jennifer A. Trusso.

Francis C. Lynch, Goodwin Procter LLP, of Boston, MA, argued for defendant-appellee Teva Pharmaceuticals USA, Inc. With him on the brief were Laurie S. Gill and John T. Bennett.

Meredith Martin Addy, Brinks Hofer Gilson & Lione, of Chicago, IL, for amicus curiae, Sandoz, Inc. With her on the brief were Glen P. Belvis and C. Noel Kaman.

Before RADER, PROST, and MOORE, Circuit Judges.

PROST, Circuit Judge.

This infringement case returns to us for the second time after remand to the district court on the issue of whether Aventis committed inequitable conduct before the United States Patent and Trademark Office ("PTO"). In our earlier opinion, we held that the dosage of the prior art composition used in half-life comparisons with the patented composition was information material to patentability, but we remanded to the district court to determine whether there was an intent to deceive by Aventis in failing to disclose the dosage. After a trial on the matter, the district court found that there was intent to deceive and held the patents unenforceable for inequitable conduct. Because we find no abuse of discretion by the district court in its holding of inequitable conduct, we affirm.

I

Aventis is the owner of U.S. Patent No. RE 38,743 ("the '743 patent") and U.S. Patent No. 5,389,618 ("the '618 patent"), which was surrendered upon the issuance of the '743 Patent. The patents are directed to a composition comprising low

molecular weight heparins ("LMWHs"). Claim 1 of the '618 patent recites:

A heterogeneous intimate admixture of sulfated heparinic polysaccharides, such sulfated polysaccharides having a weight average molecular weight less than that of heparin and said admixture consisting essentially of

from 9% to 20% of polysaccharide chains having a molecular weight less than 2,000 daltons

from 5% to 20% of polysaccharide chains having a molecular weight greater than 8,000 daltons, and

from 60-86% of polysaccharide chains having a molecular weight of between 2,000 and 8,000 daltons,

the ratio between the weight average molecular weight and the number average molecular weight thereof ranging from 1.3 to 1.6

said admixture (i) exhibiting a bioavailability and antithrombotic activity greater than heparin and (ii) having an average molecular weight of between approximately 3,500 and 5,500 daltons.

The drug is marketed as Lovenox® in the United States and Clexane® in Europe and is effective in preventing thromboses (blood clotting) while minimizing the possibility of hemorrhaging, especially during high-risk surgery. According to the specification, the advantage of the claimed LMWHs as compared to heparin is that they exhibit a longer half-life, excellent bioavailability, higher rate of absorption, low clearance, resistance to degradation,

increased residence time, and reduced sensitivity to serum factors. '618 patent, col. 2, l. 55—col. 3, l. 26.

A

The prosecution history of the '618 patent is germane to the issue of inequitable conduct. Original claim 1 of the '618 patent application recited as follows:

A heterogeneous intimate admixture of sulfated heparinic polysaccharides, such sulfated polysaccharides having a weight average molecular weight less than that of heparin and which comprise from 9% to 20% of polysaccharide chains having a molecular weight less than 2,000 daltons and from 5% to 20% of polysaccharide chains having a molecular weight greater than 8,000 daltons, the ratio between the weight average molecular weight and the number average molecular weight thereof ranging from 1.3 to 1.6.

In the first office action, the patent examiner rejected the claims under 35 U.S.C. §§ 102(b)/103 over several references, including European Patent 40,144 ("EP '144"). The examiner stated that each of the prior art references teaches sulfated heparinic admixtures within the molecular weight ("MW") range of the claims and is considered to be inherently the same as the claimed admixtures. In particular, the examiner explained that

the Patent and Trademark Office does not have facilities for testing and comparing various products, and where the prior art teaches a product which is *identical or nearly identical* to that claimed, it is incumbent

upon the Applicant to convincingly demonstrate that the claimed product provides some *unexpected or unobvious property* not demonstrated by the prior art products.

(Emphases added).

In response to the office action, Aventis independently addressed the anticipation and obviousness portion of the rejection.¹ With respect to anticipation, Aventis argued that EP '144 does not expressly state that the mixture contains two types of polysaccharides, one with a MW less than 2,000 daltons and one with a MW greater than 8,000 daltons, nor does it state the number average/weight average MW ratio. Presuming, therefore, that the examiner's anticipation rejection rested on inherency, Aventis argued that the evidence in the specification rebuts inherency. In particular, Aventis pointed to example 6 in the specification, which provides in relevant part:

This example illustrates the increase in stability, in vivo, of the mixtures of the invention, expressed by their plasma half-life.

....

(1) From the mixtures produced in Examples 3 and 4:

40 mg dose: in 75% of the cases, the half-life was longer than 4 hours, and was even longer

¹ All responses by Aventis were made by its outside counsel, Mr. Robert Schulman.

than 4½ hours in approximately 45% of the cases;

60 mg dose: in 75% of the cases, the half-life was longer than 3.7 hours.

....

- (3) When the product was prepared according to the process described in European Patent *EP 40,144*, the half-life was longer than 4½ hours in 17% of the cases.

'618 patent, col. 9, ll. 33-58 (emphases added). Example 6 was prepared with the assistance of Dr. André Uzan, a French chemist who was a non-inventor. Based on the example, Aventis argued that the claimed LMWHs exhibit a significantly longer half-life than formulations prepared in accordance with EP '144. Aventis went on to explain that, because it is well established that compounds are inseparable from their properties, the evidence of a difference in a property, i.e., half-life, serves as evidence of a difference in structure. With regard to the obviousness portion of the rejection, Aventis contended that, under 35 U.S.C. § 103, the prior art must suggest the modification to one of skill in the art, yet EP '144 provides absolutely no suggestion to select the particular combination of oligosaccharide chains of specified lengths as claimed.

The examiner was not convinced and issued a second (final) office action, maintaining the prior 102/103 rejection "for the reasons of record in the last Office action." The examiner reiterated that the MW requirements of the claimed compounds are within the range of the compounds disclosed in EP '144 and that any properties would be inherent in the prior

art compounds because they have the same structure as the claimed compounds.²

Thereafter, Aventis amended claim 1 to read:

A heterogeneous intimate admixture of sulfated heparinic polysaccharides, such sulfated polysaccharides having a weight average molecular weight less than that of heparin and said admixture comprising³

from 9% to 20% of polysaccharide chains having a molecular weight less than 2,000 daltons

from 5% to 20% of polysaccharide chains having a molecular weight greater than 8,000 daltons, and

from 60–86% of polysaccharide chains having a molecular weight of between 2,000 and 8,000 daltons,

² The examiner also reiterated that

the Patent and Trademark Office does not have facilities for testing and comparing various products, and where the prior art teaches a product which is *identical or nearly identical* to that claimed, it is incumbent upon the Applicant to convincingly demonstrate that the claimed product provides some *unexpected or unobvious property* not demonstrated by the prior art products.

(Emphasis added).

³ Upon filing a continuing application “comprising” was changed to “consisting essentially of,” which is how the claim read when it issued.

the ratio between the weight average molecular weight and the number average molecular weight thereof ranging from 1.3 to 1.6,

said admixture (i) exhibiting a bioavailability and antithrombotic activity greater than heparin and (ii) having an average molecular weight of between approximately 3,500 and 5,500 daltons.

Aventis also submitted a declaration from Dr. Uzan ("first Uzan declaration"). In ¶ 8 of the declaration, Dr. Uzan distinguished the claimed formulations from the formulations in EP '144. First, he noted that the half-life of the claimed formulation is greater than 4½ hours 45% of the time, as compared to the EP '144 formulation which achieved such a half-life only 17% of the time. He remarked, "This represents an increase in 250% in the half life and is very significant because it enables the same effect to be achieved with lower dosages." Further, Dr. Uzan stated that he analyzed the EP '144 product and found that 21% of the chains had a MW lower than 2,000; 6% of the chains had a MW greater than 8,000; and 73% of the chains had a MW between 2,000 and 8,000. *Id.* Finally, he concluded that "the formulations of [EP '144] are clearly outside the scope of the present invention." Aventis relied on example 6 and the first Uzan declaration to address the anticipation rejection, arguing that the compounds disclosed in EP '144 are not inherently the same as the claimed compounds because the claimed compounds have a longer half-life and because compounds prepared in accordance with EP '144 fall outside the scope of the claims. With respect to obviousness, Aventis argued that the claimed

compounds are non-obvious over EP '144 because the compositions in EP '144 did not exhibit the unexpected properties of the claimed combination of MW chains.

In the third office action (first office action in the continuing application), the examiner affirmatively withdrew several 102/103 rejections over other prior art references. The examiner continued to reject the claims under 35 U.S.C. § 103 over EP '144 "for the reasons of record in" the second office action. According to the examiner, EP '144 teaches "admixtures of sulfated heparinic polysaccharides having molecular weight ranges which are not patentably distinct from those of the instant claims."⁴ The examiner explained that "the instant molecular weight requirements are highly similar to those of the prior art molecular weight ranges," and that no evidence has been presented that the claimed compounds would have "any properties or activities not necessarily inherent [in] the prior art compounds." With respect to the half-life comparisons between the claimed compounds and EP

⁴ The examiner reiterated the statement, in a slightly modified form, that

the Patent and Trademark Office does not have facilities for testing and comparing various products, and where the prior art teaches a product which is *nearly identical* to that claimed, it is incumbent upon the Applicant to convincingly demonstrate that the claimed product provides some *unexpected or unobvious property* not demonstrated by the prior art products.

(Emphases added).

'144, the examiner stated that the "[a]pplicant has failed to provide evidence that the alleged difference between the half-life of the [EP '144] product and that of the [claimed] mixture is statistically significant." Further, the examiner contended that the first Uzan declaration showed that the differences in composition based on MW were minimal and there was no showing of any unexpected results. Aventis responded by submitting another declaration from Dr. Uzan ("second Uzan declaration"). In ¶ 3 of the declaration, Dr. Uzan referenced five tables comprising the raw data from the half-life comparisons between the claimed compound and the EP '144 compound, which tables were attached to the declaration.⁵ Dr. Uzan also provided results from a statistical analysis showing a statistically significant difference between the mean half-life for the claimed compound and that of the EP '144 compound. Specifically, Dr. Uzan reported, "For the claimed compound $T_{1/2}$ was 4.36 ± 1.07 . For the compound of [EP '144], $T_{1/2}$ was 3.33 ± 0.2 ," and the statistical analysis showed that 4.36 and 3.33 were statistically significant. The mean half-life of 4.36 for the claimed compound was taken from Table X, which indicated the dosage to be 40 mg. The mean half-life of 3.33 for the EP '144 compound was taken from Table III, which did not mention the dosage.

Aventis argued, in its response, that EP '144 does not suggest compounds containing

⁵ Half-life data for the patented compound were contained in Tables I, X, and XI. Half-life data for the EP '144 compound were contained in Tables A and III.

polysaccharides of the claimed MW in the claimed proportions and that the examiner improperly relied on inherency to reject the claimed compounds over EP '144. Referring to the second Uzan declaration, Aventis asserted that different half-lives are obtained with the claimed preparation as compared to the preparation of EP '144. Therefore, Aventis averred, the claimed compounds have been shown to differ from the compounds of EP '144 in both their structure and properties.

Thereafter, the '618 patent application was allowed.

B

Amphastar Pharmaceuticals, Inc. ("Amphastar") and Teva Pharmaceuticals USA, Inc. ("Teva") each filed an Abbreviated New Drug Application ("ANDA") with the FDA to obtain approval to a market generic version of Lovenox®. The ANDA contained a paragraph IV certification challenging the two Aventis patents.

Aventis sued both Teva and Amphastar for infringement of the '618 patent in the United States District Court for the Central District of California. *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, 390 F. Supp. 2d 936, 938 (C.D. Cal. 2005) ("*Aventis I*"). Amphastar filed a motion for summary judgment on its affirmative defense and counterclaim that the '618 patent is unenforceable due to inequitable conduct. *Id.* at 938–39. Specifically, Amphastar averred that Dr. Uzan engaged in inequitable conduct by failing to disclose that the half-life studies comparing the patented compound to the EP '144 compound were at different doses. *Id.* at 941, 944.

The district court determined that the representation by Aventis that the patented compound had an improved half-life as compared to the EP '144 compound was material to patentability because Aventis referred to the improved half-life at least four times during prosecution and the examiner ultimately allowed the '618 patent application after the final representation that the difference in mean half-life was statistically significant. *Id.* at 950–51. The court found a strong inference of intent to deceive because it could find no credible explanation for comparing half-lives at different doses and because comparisons at the same dose showed little difference in half-life. *Id.* at 951–52. After weighing the evidence of materiality and intent, the court found weighty uncontroverted evidence establishing inequitable conduct. *Id.* at 952. It, therefore, granted summary judgment against Aventis and held the '618 patent unenforceable.⁶ *Id.*

⁶ One day prior to issuance of the district court's order, Aventis surrendered the '618 patent to the PTO pursuant to reissue proceedings in the '743 patent application. *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, 390 F. Supp. 2d 952, 954 (C.D. Cal. 2005). In a subsequent order, the district court granted Aventis's motion to substitute the '743 patent for the '618 patent, and amended its earlier holding of unenforceability to apply also to the '743 patent. *Id.* at 957. In so holding, the district court relied on the well-settled principle articulated in *Hoffman-La Roche Inc. v. Lemmon Co.*, 906 F.2d 684 (Fed. Cir. 1990), that a reissue proceeding cannot rehabilitate a patent held to be unenforceable due to inequitable conduct. *Id.* at 688. Thus, contrary to the assertion by the dissent, *op.* at 1352, the district court was fully aware of the reissue proceeding, yet recognized

On appeal, Aventis argued that the district court erred in finding materiality because if the dose information were material to patentability, the examiner would have requested it because: she was presented with half-life data that enabled her to compare various doses, Dr. Uzan informed the examiner that the half-life comparison was done at different doses, those of skill in the art frequently compare half-lives at different doses, and half-life is independent of dose. *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, 176 Fed. Appx. 117, 120 (Fed. Cir. 2006) (“*Aventis II*”). To support the argument that Dr. Uzan informed the examiner that the half-life comparisons were done at different doses, Aventis relied on the statement in the first Uzan declaration that “[t]his represents an increase in 250% in the half life and is very significant because *it enables the same effect to be achieved with lower dosages*,” and Dr. Uzan’s deposition testimony stating that he believed this to mean “that the comparison is a comparison between two doses of which one is lower than the other.” *Id.* at 120–21 (emphasis added) (internal quotations omitted). Aventis relied on this same statement to argue that Dr. Uzan did not intend to deceive the examiner. *Id.* at 123. Aventis further argued lack of intent based on the fact that Dr. Uzan submitted half-life data for the claimed compound at 60 mg, as well as at 40 mg. *Id.*

[Footnote continued from previous page]
that any holding of unenforceability in the original application extended to the reissue application.

With regard to materiality, this court held that it was not plausible to read the statement in the first Uzan declaration as indicating to the examiner that the half-life comparison was done at different doses and, therefore, there was no genuine issue of material fact that Dr. Uzan did not disclose that the comparison was made using data for the two compounds at different doses. *Id.* at 121. We also rejected Aventis's explanation for nondisclosure that using different doses in half-life comparisons was common practice in the field because, in contrast to the references cited in support of this proposition, Aventis did not disclose the actual doses. *Id.* Further, this court did not accept the explanation that the half-life data were dose independent because the evidence clearly suggested otherwise. *Id.* at 121–22. Therefore, we concluded that the withholding of the EP '144 dosage information prevented the examiner from considering information important to patentability and constituted a failure to disclose material information. *Id.* at 122.

While this court found that the dosage of the EP '144 composition was indeed information material to patentability, we held that the district court erred in finding intent to deceive on summary judgment. *Id.* In particular, we held that the reasonableness of the comparison at different doses is relevant to determining whether there was an intent to deceive in withholding the dosage of the EP '144 composition. *Id.* at 122–23. This court reasoned:

[T]he district court . . . ultimately concluded that the facts supported a strong inference of intent to deceive. The district court's inference was reasonable—by failing to

disclose that the EP 40,144 data was at a 60 mg dose, Aventis may have been painting the rosiest picture possible as to the half-life improvement of its claimed compounds in an attempt to deceive the examiner. . . . However, there is another reasonable inference—namely, as Aventis argues, if the comparison between different doses was reasonable, the failure to disclose may have been due purely to inadvertence.

Id. at 123. Accordingly, this court reversed the grant of summary judgment of unenforceability of the '618 patent and '743 patent, and remanded to the district court for determination of whether there was intent to deceive. *Id.*

Following remand, the district court held a bench trial limited to the issue of intent. *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, 475 F. Supp. 2d 970, 975 (C.D. Cal. 2007) ("*Aventis III*"). Thereafter, the court issued its opinion, considering the principle explanations proffered by Aventis for Dr. Uzan's failure to disclose the dose of the EP '144 composition in its half-life comparisons. These explanations were that: (1) comparison of half-lives at different doses was reasonable because it was customary to compare the half-lives of different drugs at the "clinically relevant dose," i.e., the dose presenting the best efficacy-safety ratio, and the half-life comparisons were intended to show a difference in therapeutic properties, not a compositional difference; (2) comparison of half-lives at different doses was reasonable because half-lives are dose independent; and (3) the failure to disclose was due merely to inadvertence. *Id.* at 977–92.

The district court found Dr. Uzan's clinical relevance justification implausible because such a justification presumed a compositional difference between the compounds being compared, yet the issue of inherency was repeatedly raised by the examiner during prosecution. *Id.* at 977-82. The court noted that the examiner recognized that a compound's properties, e.g., half-life, are inherent in its composition and thereby rejected the claims as anticipated by the EP '144 compound under 35 U.S.C. § 102. *Id.* Therefore, the court was not persuaded that Dr. Uzan presented the half-life comparisons to show only a difference in property and not also a difference in composition. *Id.* The court was similarly unpersuaded by Aventis's dose-independence argument because the evidence did not establish that the half-lives were dose-independent, given the high intra-subject variability. *Id.* at 984-86.

Furthermore, the court rejected Dr. Uzan's clinically-relevant dose justification on the grounds that it was incredible because: (1) there was no statistical difference in half-lives when the 60 mg dose of EP '144 composition was compared to the patented composition at a 20 mg, 60 mg or 80 mg dose, i.e., there was a statistical difference only when a 40 mg dose of the patented composition was compared; (2) the '618 patent was not limited to safe and effective doses for particular therapeutic indications; (3) there were a number of preferred therapeutic doses for the patented composition; and (4) Aventis offered no corroborating evidence to support Dr. Uzan's clinically relevant dose justification. *Id.* at 986-89.

Finally, the court declined to find that Dr. Uzan's failure to disclose the difference in doses could be justified based on inadvertence because it was not credible that a scientist with Dr. Uzan's qualifications could have committed, and failed to correct during a lengthy prosecution, such an egregious error, and there was a complete absence of evidence suggesting negligence throughout prosecution. *Id.* at 989–92.

Based on the totality of the facts and circumstances, the court determined that but for Dr. Uzan's intentional omissions, the probability was high that the '618 patent would not have issued. *Id.* at 994. Accordingly, the court held the '618 patent and the '743 patent unenforceable due to inequitable conduct. *Id.*

Aventis appeals the district court's finding of intent to deceive and holding of inequitable conduct. We have jurisdiction pursuant to 28 U.S.C. § 1295(a) (1).

II

We review a district court's finding of intent to deceive for clear error. *Monsanto Co. v. Bayer Bioscience N.V.*, 514 F.3d 1229, 1233 (Fed. Cir. 2008); *Cargill, Inc. v. Canbra Foods, Ltd.*, 476 F.3d 1359, 1364 (Fed. Cir. 2007). A finding of intent will not be overturned "in the absence of a 'definite and firm conviction' that a mistake has been made." *Hoffmann-LaRoche, Inc. v. Promega Corp.*, 323 F.3d 1354, 1359 (Fed. Cir. 2003) (quoting *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995)). We review the district court's ultimate holding of inequitable conduct for abuse of discretion. *Monsanto*, 514 F.3d at 1233–34; *Cargill*, 476 F.3d at 1365. We will overturn a holding of inequitable

conduct only if it is based on clearly erroneous findings of fact or a misapplication or misinterpretation of relevant law or if the holding evidences a clear error of judgment. *Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) (en banc in relevant part). Decisions by the district court concerning the admission or exclusion of evidence are reviewed for abuse of discretion. *United States v. Curtin*, 489 F.3d 935, 943 (9th Cir. 2007) (en banc); *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1310 (Fed. Cir. 2006).

“To satisfy the intent to deceive element of inequitable conduct, ‘the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.’” *Impax Labs., Inc. v. Aventis Pharms. Inc.*, 468 F.3d 1366, 1374–75 (Fed. Cir. 2006) (quoting *Kingsdown*, 863 F.2d at 876). Given that direct evidence is often unavailable, intent is generally inferred from surrounding facts and circumstances. *Id.* at 1375. The district court, upon finding materiality and intent, shall “balance the equities to determine whether the patentee has committed inequitable conduct that warrants holding the patent unenforceable.” *Id.* (quoting *Monsanto Co. v. Bayer Bioscience N.V.*, 363 F.3d 1235, 1239 (Fed. Cir. 2004)). “The more material the omission or misrepresentation, the less intent that must be shown to elicit a finding of inequitable conduct.” *Id.*

III

A

Now, on its second time on appeal, Aventis offers a new justification for Dr. Uzan’s failure to disclose

the dosage information in his half-life comparisons.⁷ According to Aventis, Dr. Uzan's half-life comparisons were intended to show a difference in properties in response to the obviousness rejection under 35 U.S.C. § 103, not to demonstrate a compositional difference to address the anticipation rejection under 35 U.S.C. § 102, as the district court concluded. Aventis's argument is premised on the fact that while a half life comparison must be done using equivalent doses to establish a compositional difference, a half-life comparison may be done using different doses if the purpose is to establish a difference in property. In fact, Aventis argues, it is more appropriate to use the "clinically relevant dose" of each compound to demonstrate a difference in property.

As a preliminary matter, it appears that Aventis's argument would require us, at least in part, to revisit our prior holding on materiality. The essence of Aventis's argument is that the reason that Dr. Uzan did not disclose the dosage of the prior art compound in his half-life comparisons is that the comparisons were not being used to show a compositional difference and, therefore, the dosage information was not material. We have previously determined, however, that the dosage information

⁷ We note that in its first appeal, Aventis argued only that Dr. Uzan did not have deceptive intent in failing to disclose the dosage information because he thought he informed the examiner that the comparisons were done at different doses, and because he did provide half-life data for the claimed compound at 60 mg as well as at 40 mg. *Aventis II*, 176 Fed. Appx. at 123.

was material to patentability. *Aventis II*, 176 Fed. Appx. at 122. Nevertheless, because materiality and intent to deceive are necessarily intertwined, *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1455 (Fed. Cir. 1984), we will consider the merits of Aventis's argument with respect to deceptive intent.

Aventis contends that the district court made two clearly erroneous findings of fact: (1) that the central question relating to patentability was compositional differences, and (2) that the purpose of Dr. Uzan's half-life comparisons was to show compositional differences. According to Aventis, coursing throughout the district court's opinion is the notion that the central question relating to patentability was compositional differences. During oral argument, Aventis emphasized that the district court referred to compositional differences nineteen times in its opinion. Oral Arg. at 3:9–3:17, *available at*

<http://www.cafc.uscourts.gov/oralarguments/mp3/2007-1280.mp3>. As an example, Aventis quoted the court:

Thus, the central question throughout the prosecution of the '618 patent was whether the [claimed] and [the] EP '144 LMWH products were compositionally different.

Id. at 10:50–11:03; *see Aventis III*, 475 F. Supp. 2d at 982. Aventis thus contends that the district court erroneously concluded that anticipation was the only rejection of record, even though there was an obviousness rejection present throughout prosecution. Moreover, Aventis asserts that the district court erred in concluding that the "issue of obviousness necessarily folds into, and is subsumed,

by inherency.” *Aventis III*, 475 F. Supp. 2d at 982 n.10.

We find nothing in the district court’s opinion to suggest that it did not recognize the existence of the obviousness rejection, or that it believed the anticipation rejection to be the *only* rejection of record. Indeed, several statements in the opinion clearly indicate that the court was aware of the obviousness rejection. *Id.* at 980 (“It also relied on [the claimed composition’s] properties *to rebut obviousness*.”), (“[B]ecause the ratio identified by [the claimed] LMWH exhibited superior properties over EP ’144, the inventive formulation could neither be inherent *nor obvious*.”), (“This signaled to Aventis that its reliance on biochemical properties held promise for overcoming both the [primary examiner’s] inherency *and obviousness rejections*.”) (emphases added). Although the court incorrectly suggested, in a footnote, that obviousness is subsumed by inherency, we see this as merely a recognition by the court that the notion of inherency was part and parcel of the examiner’s rejections. *Id.* at 979. In other words, the properties of a compound are inherent in its composition and, therefore, a difference in property could successfully demonstrate a difference in composition. *Id.* The court understood that, based on the information available to her, the examiner viewed the patented composition and the EP ’144 composition to be inherently the same, or nearly the same, and, because the Patent Office did not have the facilities to test the products, the examiner invited Aventis to provide evidence of a difference in property to show a compositional difference. *Id.* at 980; see *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977). We find no clear error in the district court’s ultimate conclusion.

Aventis next contends that the district court clearly erred in finding that the purpose of Dr. Uzan's half-life comparison was to show compositional differences to address the anticipation rejection under 35 U.S.C. § 102. Instead, Aventis argues, the MW distribution analysis in the first Uzan declaration, showing a difference between the claimed compounds and those disclosed in EP '144 in the proportion of chains of a given MW, was directed to the anticipation rejection; the half-life comparisons were directed to the obviousness rejection. Further, Aventis contends, Dr. Uzan's statement at the end of the declaration that "the formulations of [EP '144] are outside the scope of the claimed invention," was based on the MW distribution analysis, not the half-life comparisons. According to Aventis, the district court improperly concluded that Aventis could not establish compositional differences with the MW distribution analysis, so it relied instead on the half-life comparisons to show that the compounds were not identical. In support, Aventis quotes the court's opinion:

But Aventis could not successfully distinguish [the patented compound] merely by appealing to [its] ratio of number average and weight average molecular weights. The EP '144 patent is not limited by a specific ratio of constituents. Rather it employs open claim language "comprising various proportions of particular molecular weight products." Therefore, Aventis attacked sameness based on a difference in properties.

Oral Arg. at 14:21-14:52 (quoting *Aventis III*, 475 F. Supp. 2d at 980).

We cannot agree that the district court clearly erred in its determination that the half-life comparisons were, at least in part, intended to show compositional differences. Nothing in example 6 suggests that the half-life comparison was designed to show only non-obviousness and not lack of identity. The beginning of the example merely states: "This example illustrates the increase in stability, in vivo, of the mixtures of the invention, expressed by their plasma half-life." '618 patent, col. 9, ll. 33-35. Moreover, the first Uzan declaration does not clearly delineate between evidence intended to address the anticipation rejection and evidence intended to address the obviousness rejection. All of the evidence directed to the EP '144 reference appears in ¶ 8 of the declaration, without distinction between the § 102 and the § 103 aspects of the rejection, and there is no basis for concluding that the final statement in ¶ 8—Thus, the formulations of [EP '144] are clearly outside the scope of the present invention"—refers only to the MW distribution data and not to the half-life data. We likewise reject Aventis's contention that the court did not recognize that the half-life comparisons were, in part, intended to demonstrate nonobviousness. In fact, immediately following the portion of the opinion quoted by Aventis, the court continued: "It also relied on [the claimed composition's] properties to rebut obviousness." *Aventis III*, 475 F. Supp. 2d at 980. In addition, the court, in reference to a statement by the examiner in the second office action, observed, "This signaled to Aventis that its reliance on biochemical properties held promise for overcoming both the [primary examiner's] inherency and obviousness rejections." *Id.* Therefore, we conclude that the district court properly found that the half-life

comparisons were intended to address both the anticipation and obviousness rejections, and, to the extent that they were intended to address the anticipation rejection, the failure to disclose the dosage information evidenced intent to deceive.⁸

Aventis further contends that, in the third office action, the examiner withdrew the § 102 rejection and maintained only the § 103 rejection over EP '144. Yet, Aventis asserts, it was not until the second Uzan declaration, which was submitted after the third office action, that Dr. Uzan provided a statistical analysis showing that the half-life differences were statistically significant. Hence, Aventis urges, the examiner clearly withdrew the § 102 rejection based on the MW distribution data, and the half-life data in the second Uzan declaration was intended only to overcome the § 103 rejection. Aventis thus avers that the district court erred in concluding that the anticipation rejection was still pending at the time of the third office action.

⁸ Aventis further argues that the district court erroneously imputed to Dr. Uzan arguments made by Aventis's attorney, Mr. Schulman, in response to the examiner's rejections. While it is indeed true that Mr. Schulman represented to the examiner that the difference in half-life indicated that the compositions were different, we find nothing to suggest that the district court relied entirely, or in large part, on Mr. Schulman's statements in determining that Dr. Uzan intended to deceive the examiner by his failure to disclose the dosage information in his half-life comparisons. Instead, we find that the court's conclusion rested almost entirely on example 6 of the specification and on the first Uzan declaration.

The court apparently came to the conclusion that the anticipation rejection was still pending because the rejection had not been expressly withdrawn.⁹ *Id.* at 982 n.9. Although the court may have erred in concluding that the anticipation rejection was still pending in the third office action, that conclusion was not critical to the court's ultimate determination that there was intent to deceive. In fact, as explained by the court:

Even if the Court were to accept as true Aventis'[s] unlikely contention that, by the time of Dr. Uzan's Second Declaration, the [primary examiner] had conceded that the [claimed] and EP '144 products were different, there can be no question that inherency was the central, dispositive question up to that point.

Id. at 982. Therefore, even if anticipation were not at issue at the time of the third office action, the court still concluded, based on evidence prior to the third office action, that there was deceptive intent. Any error by the court in concluding that anticipation was still at issue in the third office action does not override the evidence of intent to deceive based on the failure to disclose dosage information in the half-life comparisons in example 6 of the specification and in the first Uzan declaration,

⁹ Notably, the examiner did expressly withdraw other prior art rejections. Also, the examiner stated that the rejection over EP '144 was "repeated for the reasons of record," and reiterated that any properties were considered to be inherent in the prior art compounds, making the record somewhat ambiguous.

both of which were submitted prior to the third office action. We cannot agree that the court clearly erred in its factual findings prior to the third office action and in its determinations with respect to intent to deceive based thereon.

In sum, we find that the district court did not clearly err in determining that the half-life comparisons were, in part, intended to show compositional differences to address the anticipation rejection under 35 U.S.C. § 102 and, therefore, rejecting Aventis's argument that they were intended only to show differences in property, such that dosage information was immaterial.

B

Aventis next argues that the district court clearly erred in excluding evidence that comparison of half-lives at different doses was the standard practice in the LMWH field. The "clinically relevant dose," Aventis avers, is the standard dose for comparison of half-lives, and every contemporaneous publication comparing half-lives did so at the clinically relevant doses, even though those doses may have differed. Aventis contends that Dr. Uzan selected the 40 mg dose for the patented compound and the 60 mg dose for the EP '144 compound because they were the clinically relevant dose. According to Aventis, the 40 mg dose for the patented compound was the approved dose for its most important indication, namely, prevention of deep venous thrombosis ("DVT") during high-risk orthopedic surgery.

The district court excluded the evidence of industry practice because it determined that such evidence was irrelevant to the reasonableness of Dr. Uzan's nondisclosure. *Id.* at 975 n.6. We find no abuse of discretion by the court's exclusion of the

evidence. First, evidence of industry practice of clinically-relevant doses would only be pertinent if there was a finding that the half-life comparisons were used to address obviousness, and not anticipation, because Aventis has conceded that half-life comparison must be at the same dose to show compositional differences. Here, however, the district court found, and we have affirmed, that the half-life comparisons were at least in part intended to show compositional differences to address the anticipation rejection.

Furthermore, the district court, after examining all of the evidence, found it simply incredible that Dr. Uzan selected the clinically relevant doses for his half-life comparisons. In particular, the court noted that neither the claims nor the specification were limited to prevention of DVT in high-risk surgical patients and that the patented composition could be used at several different doses for several different indications;¹⁰ that there was not nearly as

¹⁰ Aventis disputes this finding by the district court, relying on *In re Chupp*, 816 F.2d 643, 646 (Fed. Cir. 1987), for the proposition that a compound need not excel over a prior art compound in all properties to be patentable. However, whether a superior property need be demonstrated throughout the entire claim scope in order to show nonobviousness of a claimed product over a prior art product is a separate question from whether there was deceptive intent in failing to disclose material dosage information in a comparison between the claimed product and the prior art product when there is nothing in the claims or specification to suggest that the dosage of the claimed product was the dosage used for a particular purpose.

significant a difference, or no difference at all, in half-life when any other dose (i.e., 20 mg, 60 mg, or 80 mg) of the patented compound was compared to the 60 mg dose of EP '144; and that there was no evidence corroborating Dr. Uzan's testimony that he selected the 40 mg dose due to its efficacy in preventing DVT.¹¹ *Id.* at 986–89. Evidence of industry practice using clinically relevant doses would have no impact on the court's credibility determination with respect to whether Dr. Uzan intended the clinically relevant doses in this case.

Therefore, we cannot agree that the district court abused its discretion in excluding evidence that comparison of half-lives at different doses to demonstrate a difference in property was routine practice in the LMWH field.

C

Aventis advances several additional arguments focused on whether Dr. Uzan really had deceptive intent. First, Aventis argues that the court erred in not considering exculpatory testimony by Dr. Uzan indicating that he believed that he informed the examiner that he was comparing half-lives at different doses when he stated, in the first Uzan declaration: "[T]his represents an increase in 250% in the half life and is very significant because it enables the same effect to be achieved with lower dosages." This court already concluded in the prior

¹¹ The court further noted that the 60 mg dose of the EP '144 composition was the only dose for which there was half-life data available. *Aventis III*, 475 F. Supp. 2d at 984.

appeal, "that there is no genuine issue of material fact that Dr. Uzan did not disclose in this statement that the comparison was made using data from different doses." *Aventis II*, 176 Fed. Appx. at 121. We left open the possibility, however, that Dr. Uzan may have *intended* by this statement to convey to the examiner that the half-life comparisons were done at different doses. *Id.* at 121 n.2. The district court heard Dr. Uzan's testimony and considered it along with all other evidence relevant to deceptive intent, yet determined that it did not outweigh the cumulative evidence evincing an intent to deceive. We cannot find that the district court clearly erred in concluding that other evidence outweighed Dr. Uzan's testimony that he intended by this statement to inform the examiner that the half-life comparisons were done at different doses.

Next, *Aventis* avers that Dr. Uzan did not fail to disclose the dosage information for the patented compound to the examiner. In example 6, *Aventis* urges, Dr. Uzan provided half-life data for the patented compound at 60 mg as well as at 40 mg; and, in the second Uzan declaration, he attached the raw half-life data for the patented compound in Table XI, which showed that the half-life of the patented compound was less at a 60 mg dose than at the 40 mg dose that was used in the comparison with the EP '144 compound. Even if we acknowledge that half-life data at other doses for the patented compound were provided to the examiner, the data were provided in a very misleading way. *Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.*, 984 F.2d 1182, 1191 (Fed. Cir. 1993) (inference of deceptive intent may arise from misleading character of affidavit); *accord B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1585 (Fed. Cir.

1996). In example 6, half-life data for the patented compound at the 4½ hour cut-off, which could be readily compared to the 4½ hour cut-off data for the EP '144 compound, were only provided at the 40 mg dose. In the first Uzan declaration, reference was made only to the half-life comparison at the 4½ hour cut-off, without reference to the dosage of the patented compound. Moreover, Dr. Uzan failed to disclose, in either example 6 or the first Uzan declaration, the dosage information for the EP '144 compound. Accordingly, we cannot conclude that the district court's finding that Dr. Uzan failed to disclose the dosage information was clearly erroneous.

Lastly, Aventis contends that Dr. Uzan's failure to disclose the dosage information was purely due to inadvertence. In support, Aventis relies on other evidence of inadvertent and benign mistakes made during prosecution of the '618 patent application, suggesting that its omission of the dose of the EP '144 compound was likewise inadvertent. For example, Aventis points out that the first Uzan declaration mistakenly stated that the claimed compound had 1.5% of chains below a specified MW, whereas the remarks by Aventis in its response stated 31.5% of the chains. Here, however, in contrast to any inadvertent omissions made during prosecution, there is sufficient evidence of concealment to warrant a determination that the dose information was intentionally withheld. The fact that Aventis made other inadvertent errors during prosecution has no bearing on this material failure to disclose. Therefore, we cannot agree that the district court clearly erred by not concluding that Dr. Uzan's failure to disclose the dosage information was due to mere inadvertence.

IV

For the foregoing reasons, we affirm the district court's finding of inequitable conduct and holding of unenforceability of the '618 and '743 patents.

AFFIRMED

RADER, Circuit Judge, dissenting.

This court today affirms the unenforceability of a patent due to inequitable conduct. To my eyes, this record does not show clear and convincing evidence of intent to deceive the United States Patent and Trademark Office (USPTO). Moreover, my reading of our case law restricts a finding of inequitable conduct to only the most extreme cases of fraud and deception.

Without doubt, candor and truthful cooperation are essential to an ex parte examination system. With burgeoning application rates, the USPTO must rely on applicant submissions to narrow the prior art search. And, of course, those submissions must be reliable. The threat of inequitable conduct, with its "atomic bomb" remedy of unenforceability, ensures that candor and truthfulness.

Although designed to facilitate USPTO examination, inequitable conduct has taken on a new life as a litigation tactic. The allegation of inequitable conduct opens new avenues of discovery; impugns the integrity of patentee, its counsel, and the patent itself; excludes the prosecuting attorney from trial participation (other than as a witness); and even offers the trial court a way to dispose of a case without the rigors of claim construction and other complex patent doctrines. This court has even

observed a number of cases, such as this one, that arrive on appeal solely on the basis of inequitable conduct where the trial court has apparently elected to try this issue in advance of the issues of infringement and validity. See, e.g., *Frazier v. Roessel Cine Photo Tech, Inc.*, 417 F.3d 1230 (Fed. Cir. 2005); *Semiconductor Energy Lab. Co. v. Samsung Elecs. Co.*, 204 F.3d 1368 (Fed. Cir. 2000).

This phenomenon is not new or unprecedented. At an earlier time, the Federal Circuit also observed that inequitable conduct as a litigation strategy had become a "plague." *Burlington Indus. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988). In response, this court took a case to reduce abuse of inequitable conduct. *Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) (en banc).

In light of the rejuvenation of the inequitable conduct tactic, this court ought to revisit occasionally its *Kingsdown* opinion. *Kingsdown* claimed a two-piece ostomy device. *Id.* at 869. The examiner rejected claim 50 as indefinite. *Id.* at 870. In response, *Kingsdown* amended claim 50. *Id.* Then, later in the prosecution, *Kingsdown* copied the rejected claim 50, not the amended version, into a continuation application as new claim 43. *Id.* at 870–71. The once rejected, now recopied claim 43 matured into claim 9 of U.S. Patent No. 4,460,363. *Id.* at 871. On the basis of this error that certainly called into question the integrity of the examination system, the district court found inequitable conduct. *Id.* at 871–72. This court, en banc, reversed. *Id.* at 877.

In *Kingsdown*, this court clearly conveyed that the inequitable conduct was not a remedy for every

mistake, blunder, or fault in the patent procurement process. Even mistakes that struck at the heart and integrity of the process—like repeatedly recopying and acquiring rights to a rejected claim—did not amount to inequitable conduct. Instead this court required “culpable” conduct supported by clear and convincing evidence of intent to deceive the USPTO. *Halliburton Co. v. Schlumberger Tech. Corp.*, 925 F.2d 1435, 1443 (Fed. Cir. 1991) (citing *Consol. Aluminum Corp. v. Foseco Int’l Ltd.*, 910 F.2d 804, 809 (Fed. Cir. 1990)). At the same time, it is hard to imagine a more material mistake than reasserting claims to rejected subject matter. Materiality of any undisclosed or misleading information, of course, is the other prong of an inequitable conduct analysis. *Cargill, Inc. v. Canbra Foods, Ltd.*, 476 F.3d 1359, 1363 (Fed. Cir. 2007). In sum, *Kingsdown* properly made inequitable conduct a rare occurrence.

More recently, however, the judicial process has too often emphasized materiality almost to the exclusion of any analysis of the lofty intent requirement for inequitable conduct. Merging intent and materiality at levels far below the *Kingsdown* rule has revived the inequitable conduct tactic. For example, in *Nilssen v. Osram Sylvania, Inc.*, 504 F.3d 1223 (Fed. Cir. 2007), one of the reasons this court upheld a judgment of unenforceability for an exaggerated claim of small entity status. *Nilssen* entered into agreements with Philips Electronics North America Corp. (“Philips”) to license the patents in suit. *Id.* at 1227–28. Because Phillips had more than 500 employees, the district court found that *Nilssen* had made several improper small entity maintenance fee payments to the USPTO. *Id.* at 1228. This court affirmed, stating: “[w]e therefore affirm the district court’s decision finding that all of

the patents in suit are unenforceable due to inequitable conduct in improperly claiming small entity status." *Id.* at 1233. In *General Electro Music Corp. v. Samick Music Corp.*, 19 F.3d 1405 (Fed. Cir. 1994), this court upheld unenforceability under circumstances that are even harder to reconcile with the en banc *Kingsdown* rule. The mistake in that case involved a petition to make special. *Id.* at 1407.

The applicant sought expedited examination of its application on the ground that the claimed invention was being infringed. *Id.* At that time, such a request required an oath or declaration that the applicant made a careful and thorough search of the prior art. *Id.* The applicant submitted that declaration, but later conceded that it actually had only conducted an informal search as opposed to a formal search. *Id.* This process did not result in the issuance of rejected claims, but involved nothing more than an expedited examination. Still this miscarriage rendered the entire patent unenforceable. *Id.* at 1412.

While the case at bar does not feature small entity status or expedited examination, the record still does not, in the context of *Kingsdown*, show a clear and convincing intent to deceive. We are cognizant of the high standard of review. To overturn a discretionary ruling of a district court, the appellant must establish that the ruling is based upon clearly erroneous findings of fact or a misapplication or misinterpretation of applicable law or that the ruling evidences a clear error of judgment. *Kingsdown*, 863 F.2d at 876. While the standard of review is high, it is not insurmountable. Where the district court made clear error of fact, this court must overturn such a determination.

In this case, Dr. Uzan, Associate Director of Biological Research at Aventis, assisted in the prosecution of the application that led to U.S. Patent No. 5,389,618('618) covering a low molecular weight heparin mixture invented by Roger Debie (Debie LMWH). Specifically, Dr. Uzan assembled data from various clinical studies comparing the half-lives of the Debie LMWH to a prior art LMWH invented by Mardiguian (Mardiguian LMWH). Dr. Uzan submitted this data, from the Duchier study and the Foquet study respectively, as example 6 of the patent. In submitting the data, Dr. Uzan did not draw attention to the different doses in those studies.

Without question, Dr. Uzan should have disclosed the dosage of the Mardiguian LMWH in example 6 subsection 3. Unfortunately, the Foquet study chart that Dr. Uzan used did not show the dosage information. Dr. Uzan neglected to add the information. To make it clear, Dr. Uzan did not attempt to conceal data that were otherwise present. Rather he just submitted the study without adding to the disclosure. This omission, even if negligent, is hardly *Kingsdown's* culpable intent to deceive. Moreover this omission strikes less at the integrity of the system than issuance of a rejected claim, which *Kingsdown* sanctioned.

Likewise, Dr. Uzan ought to have disclosed to the USPTO that he compared the 60 mg dose of the prior art Mardiguian LMWH to the 40 mg dose of the Debie LMWH in the declaration he submitted on March 29, 1993. Dr. Uzan testified that the different dose "did not come to his mind." In context, this explanation has merit. Dr. Uzan was asked to compare the superior pharmacokinetic properties of the Debie LMWH over the Mardiguian LMWH prior

art compound. Comparison of drug properties at their clinically relevant (and different) dosages is, of course, completely appropriate. Again, this oversight may have been careless, but hardly culpable. To my eyes, Dr. Uzan's negligence does not rise to the level of intent to deceive, particularly in comparison with *Kingsdown*.

Even a cursory review of example 6 shows no dosage indications. The Debie LMWH in subsection 1 indicates two dosages. Dosage is an element in subsections 2 and 4 as well. Thus, the absence of a dosage in subsection 3 is blatantly obvious. Surely if Dr. Uzan had intended to deceive the USPTO, he would not have made this omission so conspicuous. Moreover, I find it difficult to fathom that a scientist of Dr. Uzan's caliber and reputation would engage in such deception. As the district court points out, Dr. Uzan has had a magnificent fifty year career with Aventis, has published over 350 scientific articles and has received numerous prestigious awards including the Galien Research Prize, France's highest award for drug discovery. This world-class scientist would hardly risk his reputation and tarnish his brilliant career for a single example in the prosecution of a patent for an invention in which he was not even involved.

The inadvertence in this case presents another difficulty for a finding of intent to deceive. The omissions and prosecution errors were committed by two individuals, Dr. Uzan and Mr. Schulman, Aventis' prosecuting attorney. Collective actions call into question any showing of intent for inequitable conduct. 37 C.F.R. § 1.56 refers to the duty of candor and good faith possessed by "[e]ach individual associated with the filing and prosecution of a patent

application." (emphasis added). Mr. Schulman did not know that the doses of the Debie LMWH and the Mardiguian LMWH were different. Dr. Uzan admitted that he inadvertently neglected to add that information to the graphs. The dosage information was not on the original Foquet chart submitted to the Aventis patent department and Dr. Uzan neglected to add it. Mr. Schulman had no way of knowing that the comparison was at two different doses and therefore the impropriety of using that data to demonstrate compositional difference. Mr. Schulman's arguments also carry the markings of a good faith mistake.

Most important, Dr. Uzan himself revealed the error. This candor is inconsistent with deceptive intent. He submitted all of the underlying data to the patent office with his second declaration on June 9, 1994. Thus, unlike the situation in *Kingsdown*, Dr. Uzan corrected the mistake before it resulted in an issued patent. In Dr. Uzan's second declaration, he clearly articulated that the half-life data showed superior properties of the Debie LMWH over the prior art Mardiguian LMWH. Still, with all information before the USPTO, the examiner allowed the patent. Lastly, in early 2003, before filing its infringement suit, Aventis filed a reissue application for the '618 patent. The patent reissued on June 14, 2005 with all of the original independent claims, but without example 6. The half-life data were apparently not even necessary for patentability. The USPTO determined that the Debie LMWH was inventive over the prior art Mardiguian LMWH without relying on the controversial half-life data from example 6.

The USPTO granted the reissue a day before the district court judge granted Teva and Amphastar's summary judgment motion that the '618 patent was unenforceable. Aventis did not have the opportunity to make this argument to the trial judge. This record does not prevent this court, however, from considering all this information in evaluating the inequitable conduct finding. Thus, both materiality and intent seem suspect on this record. In sum, read in the context of *Kingsdown*, I would reverse the district court's determination of inequitable conduct.

APPENDIX B

**AVENTIS PHARMA S.A., and Aventis
Pharmaceutical, Inc., Plaintiff,**

v.

**AMPHASTAR PHARMACEUTICALS,
INC., and Teva Pharmaceuticals USA, Inc.,
Defendant.**

And Related Counterclaims

**Nos. EDCV03 887 MRP PLAX,
EDCV04 333 MRP PLAX.**

**United States District Court,
C.D. California**

Feb. 8, 2007.

*** * ***

Donald R. Dunner, Allen M. Sokal, Bryan C. Diner, Esther H. Lim, Finnegan Henderson Farabow Garrett & Dunner, Washington, DC, Michael J. McCabe II, John D. Livingstone, Robert C. Stanley, Finnegan Henderson Farabow Garrett & Dunner, Atlanta, GA, Anthony G. Brazil, Donald L. Ridge, Megan S. Wynne, Morris Polich & Purdy, Los Angeles, CA, for Plaintiffs.

Jan P. Weir, Jennifer A. Trusso, Nicole A. Varner, Steven M. Hanle, Stradling Yocca Carlson & Rauth, Newport Beach, CA, Edith Ramirez, Eugene T. Chen, Lee J. Papageorge, Quinn Emanuel Urquhart Oliver & Hedges, Los Angeles, CA, Francis

C. Lynch, Laurie S. Gill, Goodwin Procter, John T. Bennett, Palmer & Dodge LLP, Boston, MA, for Defendants.

MEMORANDUM OF DECISION FINDING IN FAVOR OF DEFENDANTS AMPHASTAR PHARMACEUTICALS, INC. AND TEVA PHARMACEUTICALS USA, INC. ON THE RELATED ISSUES OF INTENT TO DECEIVE THE PATENT AND TRADEMARK OFFICE AND INEQUITABLE CONDUCT

PFAELZER, District Judge.

I. INTRODUCTION

This case was commenced before District Judge Robert J. Timlin. Aventis Pharma S.A. and Aventis Pharmaceuticals, Inc. (collectively, "Aventis"¹) brought suit against Amphastar Pharmaceuticals, Inc. ("Amphastar") and Teva Pharmaceuticals USA, Inc. ("Teva") (collectively, "Defendants") for infringement of Aventis' patent, U.S. Patent No. 5,389,618, and its replacement, U.S. Reissue Patent No. 38,743 (collectively, "the '618 patent"). The case was transferred to this Court for all further proceedings on June 27, 2006. A bench trial on inequitable conduct was held December 4 through December 8, 2006. The Court limited its inquiry to Aventis and its agents' intent in failing to disclose

¹ Pharmuka, Rhone-Poulenc, and Phone-Poulenc Rorer are predecessor corporations to Plaintiff Aventis. At various times, each of these entities was responsible for the enoxaparin product. The Court uses "Aventis" generally to refer to whichever entity was in existence at the time.

highly material information to the United States Patent and Trademark Office ("PTO"). Based on consideration of the evidence adduced at trial and the post-trial arguments made by counsel, the Court concludes as follows:

II. BACKGROUND

Heparin is an anticoagulant used to decrease the clotting ability of the blood. Chemically, it is a heterogeneous mixture of straight-chain anionic mucopolysaccharides having anticoagulant properties. Low molecular weight heparin ("LMWH") is synthesized by various methods of heparin fractionation or depolymerization. These methods break down heparin's long, heavy polysaccharide molecules, yielding smaller, less massive chains in more homogenous proportions. The resulting mixtures consist of shorter chains of polysaccharides having lower average molecular weights.

The '618 patent claims a range of defined LMWH mixtures. These encompass the drug formulation, enoxaparin, approved by the United States Food and Drug Administration ("FDA") as an anticoagulant in diseases featuring venous thromboses. Aventis is the international pharmaceutical company that manufactures enoxaparin, which it markets under the brand name Lovenox®. Enoxaparin was approved in France in 1987. By 1989, it had "taken the French market by storm" and achieved commercial success throughout Europe. Aventis exerted a monopoly position in the European market for enoxaparin in the 1980s by virtue of European Patent 40,144 ("EP '144"), which issued in 1984 and broadly claimed undefined LMWH mixtures invented by J. Mardiguian.

Serious challenges to EP '144 soon threatened this position. Opposition proceedings initiated in the mid-1980s before the European Patent Office to revoke EP '144 as devoid of novelty had, by 1989, proved successful—the opposition was allowed, and the revocation of EP '144 became effective in October 1990. Enoxaparin did not have patent coverage in the U.S. at this time. Aventis had been forced to abandon its U.S. counterpart application to EP '144 in 1984 when it had no argument to oppose the PTO's prior-art rejections. Notwithstanding this deficit, Aventis filed its New Drug Application ("NDA") with the FDA in July 1991 to obtain marketing approval for enoxaparin in the U.S. In concert, Aventis sought to protect enoxaparin in the U.S. with an EP '144 successor: a formulation of enoxaparin invented by Roger Debie (the "Debie" or "'618" product).² This was the subject of the '618 prosecution. The high cost of FDA approval generated substantial pressure on Aventis to succeed. Internal Aventis documents reveal its commitment of "significant financial and human resources" to the "enoxaparin USA-patent situation."

The '618 prosecution involved successive rounds of rejection and appeal. The Patent Examiner ("PE") issued three Office Actions dated April 2, 1992

² Aventis filed U.S. Patent Application Serial No. 721,315 ("the '315 application") on June 26, 1991 in the PTO, claiming a priority date of June 26, 1990 based upon an earlier French application. On July 16, 1993, Aventis filed a continuation of the '315 application, United States application No. 92,577, which ultimately issued as the '618 patent.

("First Office Action"), October 16, 1992 ("Second Office Action"), and March 2, 1993 ("Third Office Action"). Each rejected the Debie formulation under 35 U.S.C. § 102 as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious in light of Mardiguian EP '144. The keystone of Aventis' strategy for overcoming the PE's rejections was to distinguish the Debie LMWH based on its purportedly superior pharmacokinetic properties—particularly, its longer plasma half-life. The '618 patent discloses that "[t]he processes described in the prior art, and especially in EP '144, do not permit the production of mixtures possessing the requisite pharmacological properties for improved therapeutic applications, namely, a sufficiently long plasma half-life, a fairly high absorption rate, a high bioavailability or alternatively, a low clearance." In support of these assertions, Aventis directed the PE's attention to Example 6 of the '618 patent ("Example 6") and the half-life analysis presented therein.³

³ Example 6 of the '618 patent provides as follows (emphasis added):

This example illustrates the increase in stability, in vivo, of the mixtures of the invention, expressed by their plasma half-life.

A first pharmacokinetic study was carried out on volunteers between 21 and 30 years of age. Subcutaneous injections of doses ranging from 20 to 80 mg/ml were performed. At intervals of time, samples were drawn (4.5 ml) and stored at approximately 4°C. The samples were then centrifuged for 15 minutes at 2,300 g and

[Footnote continued on next page]

Aventis also submitted two expert declarations from

[Footnote continued from previous page]

the platelet-poor plasma was separated and frozen prior to analysis. The half-life of the mixtures was then determined by measuring the anti-Xa activity. The results obtained were as follows:

(1) From the mixtures produced in Examples 3 and 4:

40 mg dose: in 75% of the cases, the half-life was longer than 4 hours, and was even longer than 4½ hours in approximately 45% of the cases;

60 mg dose: in 75% of the cases, the half-life was longer than 3.7 hours.

(2) *Under identical dosage conditions*, intact heparin injected intravenously possessed a half-life of approximately 0.6 hours.

(3) When the product was prepared according to the process described in European Patent EP 40,144, the half-life was longer than 4½ hours in 17% of the cases.

(4) A second study carried out *under similar conditions* on 20 patients provided the following results for the mixtures according to the present invention:

40 mg dose: in 80% of cases, the half-life was longer than 4 hours, and it was longer than 4½ hours in approximately 40% of the cases;

20 mg dose: in 60% of the cases, the half-life was longer than 3.9 hours.

its employee, French scientist Dr. Andre Uzan ("Dr.Uzan"), who was responsible for the data underlying Example 6.⁴

Throughout the prosecution, Aventis and Dr. Uzan affirmatively represented that Example 6 "clearly demonstrate[d]" a significantly longer plasma half-life for the Debie LMWH compared to Mardiguian EP '144. At no time, however, did Aventis or Dr. Uzan disclose at what dosage the half-life comparisons in Example 6 had been made. Subparagraph (3) of Example 6 omitted the experimental dose of EP '144. In his Second Declaration, Dr. Uzan presented five tables: Tables I, X, and XI referred to the '618 product, while Tables A and III referred to Mardiguian EP '144. Again, Table III failed to disclose the dose. In fact, Dr. Uzan had compared a 60 mg dose of Mardiguian EP '144 to a 40 mg dose of the Debie product. However, comparing the 60 mg dose amount of Mardiguian EP '144 to the 60 mg dose amount of the Debie product results in a far closer mean half-life.⁵ The difference is not statistically significant.

⁴ The first was submitted on March 29, 1993 ("First Declaration"), the second on May 17, 1994 ("Second Declaration").

⁵ This is evident by comparing Table III with Table XI. Table III reported the half-life for Mardiguian EP '144 at a 60 mg dose as 3.33 hours, with a standard deviation of 0.2. Table XI reported the half-life for the '618 product at a 60 mg dose as 3.70 hours, with a standard deviation of 0.82.

III. PRIOR PROCEEDINGS

Amphastar moved for summary judgment on its affirmative defense and counterclaim of inequitable conduct, arguing that Aventis and Dr. Uzan's withholding of the EP '144 dosage constituted a failure to disclose material information to the U.S. PTO and rendered the '618 patent-in-suit unenforceable. Judge Timlin agreed, finding that: (1) the EP '144 dose information was highly material, because Aventis made half-life the centerpiece of its argument for patentability, and a reasonable PF would have considered the experimental dose important in deciding whether to allow Aventis' application on that basis; and (2) the omission of the dose information supported a strong inference of intent to deceive, because the Debride product's half-life was not significantly different from EP '144 at the same dose. Accordingly, Judge Timlin granted summary judgment in favor of Amphastar and held the '618 patent and the '743 reissue patent unenforceable. *Aventis Pharma S.A. v. Amphastar Pharmaceuticals, Inc.*, 390 F. Supp. 2d 936 (C.D. Cal. 2005).

On appeal, the Federal Circuit reversed and remanded, *Aventis Pharma S.A. v. Amphastar Pharmaceuticals, Inc.*, 176 Fed. Appx. 117 (Fed. Cir. 2006), concluding that, although there were no genuine issues as to high materiality, a finding of deceptive intent was inappropriate on summary judgment. The panel conceded that Judge Timlin's inference of intent by Aventis to deceive the PTO was "reasonable," observing that "by failing to disclose that the EP 40,144 data was at a 60 mg dose, Aventis may have been painting the rosiest picture possible as to the half-life improvement of its claimed

compounds in an attempt to deceive the examiner.” *Aventis*, 176 Fed. Appx. at 123. This concession ratified Amphastar’s *prima facie* case of intent. See *Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 1192 (Fed. Cir. 1993) (“A party charging inequitable conduct may make a *prima facie* case by showing an unexplained violation of the duty of candor.”).

The panel also agreed with *Aventis*, however. The case for deceptive intent “hinge[d] on an assessment of Dr. Uzan’s credibility and an examination of the scientific rationale and facts justifying Dr. Uzan’s half-life comparison at different doses.” (Fed. Cir. Reply Br. 21-22.) *Aventis* had stated facts supporting a “plausible justification” for its material omission, but Judge Timlin had denied Dr. Uzan an opportunity to testify to it at trial.

Thus, because “there [was] another reasonable inference [than intent to deceive]—namely, as *Aventis* argue[d], if the comparison between different doses was reasonable, the failure to disclose may have been partly due to inadvertence”—the finding of intent was premature.

Upon remand and transfer, the Court entertained pre-trial motions,⁶ considered the trial

⁶ In the Court’s pretrial conference and resultant Minute Order of November 14, 2006, the Court ruled that certain opinions of *Aventis*’ medical expert, Dr. Weitz, regarding the common practice in the industry with respect to doses used to compare LMWHs would be excluded unless *Aventis* consented to hear certain opinions from Amphastar’s patent law expert, Mr. Goolkasian. *Aventis* agreed not offer expert opinion

briefs of the parties, and conducted the bench trial on intent to which the present decision relates.

IV. LEGAL STANDARD

“Inequitable conduct occurs when a patentee breaches his or her duty of ‘candor, good faith, and honesty,’” *Warner-Lambert Co. v. Teva Pharms. USA, Inc.*, 418 F.3d 1326, 1342 (Fed. Cir. 2005) (quoting *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995)), by affirmatively misrepresenting or failing to disclose material

[Footnote continued from previous page]

testimony on industry practice from paragraph 2 of Dr. Weitz’s supplemental report, and Amphastar agreed not to present Mr. Goolkasian. During the bench trial, however, Aventis repeatedly sought to introduce industry practice testimony through Dr. Uzan. Aventis also sought to avoid its agreement to restrict Dr. Weitz’s testimony on industry practice by reference to paragraphs 3 and 4, which are claimed also to deal with industry practice and stand independently of paragraph 2. Amphastar has made a post-trial motion to strike all testimony going to industry practice. The Court finds Aventis agreed with Amphastar to withhold all expert opinion testimony by Dr. Weitz on the *subject matter* of industry practice, regardless of the paragraphs from which that testimony might derive. No other conclusion obviates the need, from Amphastar’s perspective, for Mr. Goolkasian’s testimony. Dr. Uzan was not covered by Amphastar’s agreement. Dr. Uzan was also not a testifying expert under Fed. R. Civ. P. 26(a) (2). He was a percipient fact witness accused of intending to deceive the PTO, and the focal point of the trial. However, the Court finds that the actual practice in LMWHs, even if established, is irrelevant to the reasonableness of Aventis’ and Dr. Uzan’s non-disclosures in this case. Accordingly, Amphastar’s December 4, 2006 motion to strike is denied.

information to the PTO. *Pharmacia Corp. v. Par Pharm., Inc.*, 417 F.3d 1369, 1373 (Fed. Cir. 2005). “The inequitable conduct analysis is performed in two steps comprising ‘first, a determination of whether the withheld reference meets a threshold level of materiality and intent to mislead, and second, a weighing of the materiality and intent in light of all the circumstances to determine whether the applicant’s conduct is *so culpable* that the patent should be held unenforceable.’” *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1362-63 (Fed. Cir. 2003) (emphasis added) (quoting *Purdue Pharma L.P. v. Boehringer Ingelheim GMBH*, 237 F.3d 1359, 1366 (Fed. Cir. 2001)).

The quantum of proof required to show intent is tied to materiality; the “more material the omission or the misrepresentation, the lower the level of intent required to establish inequitable conduct.” *Semiconductor Energy Lab. Co., Ltd. v. Samsung Elecs. Co., Ltd.*, 204 F.3d 1368, 1375 (Fed. Cir. 2000). “Materiality does not,” however, “presume intent, which is a separate and essential component of inequitable conduct.” *GFI, Inc. v. Franklin, Corp.*, 265 F.3d 1268, 1274 (Fed. Cir. 2001) (quoting *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 552 (Fed. Cir. 1990)). Although “a lesser quantum of proof is needed to establish the requisite intent” in this case, *Aventis Pharma*, 176 Fed. Appx. at 119, Amphastar and Teva must still prove the predicate facts by clear and convincing evidence. *Ferring B.V. v. Barr Labs., Inc.*, 437 F.3d 1181, 1187 (Fed. Cir. 2006).

Satisfying this burden does not require “smoking gun” evidence. *Paragon*, 984 F.2d at 1189. The Federal Circuit has “repeatedly said that direct

evidence of intent is unavailable in most cases and unnecessary in any event.” *Frazier v. Roessel Cine Photo Tech, Inc.*, 417 F.3d 1230, 1235 (Fed. Cir. 2005); see also *Bruno Indep. Living Aids, Inc. v. Acorn Mobility Servs. Ltd.*, 394 F.3d 1348, 1354 (Fed. Cir. 2005) (“Intent need not, and rarely can, be proven by direct evidence.”) (quoting *Merck & Co., Inc. v. Danbury Pharmacal, Inc.*, 873 F.2d 1418, 1422 (Fed. Cir. 1989)); *Ulead Sys., Inc. v. Lex Computer & Mgmt. Corp.*, 351 F.3d 1139, 1146 (Fed. Cir. 2003) (“[d]irect evidence of deceptive intent is not required”). Rather, “in the absence of a credible explanation, intent to deceive is generally inferred from the facts and circumstances surrounding a knowing failure to disclose material information.” *Bruno Indep. Living*, 394 F.3d at 1354; see also *Digital Control, Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1319 (Fed. Cir. 2006) (“Intent...may be inferred from the totality of the evidence.”); *Ulead Sys.*, 351 F.3d at 1146 (“deceptive intent is...usually inferred from the patentee’s overall conduct”). Such an inference is commonly supported “by a showing of acts the natural consequence of which were presumably intended by the actor.” *Paragon*, 984 F.2d at 1189.

Proving intent does not require showing that an individual involved in the prosecution “subjectively believed the [] submission was deceptive.” *Frazier*, 417 F.3d at 1235-36. It does require that “the involved conduct, viewed in light of all the evidence, including evidence of good faith, [] indicate sufficient culpability to require a finding of intent to deceive.” *Paragon*, 984 F.2d at 1189 (quoting *Kingsdown Med. Consultants Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) (en banc)). Circumstances indicative of good faith must be considered. *Gambro Lundia*

AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1580 (Fed. Cir. 1997). But a "patentee facing a high level of materiality and clear proof that it knew or should have known of that materiality, can expect to find it difficult to establish 'subjective good faith' sufficient to prevent the drawing of an inference of intent to mislead." *Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1257 (Fed. Cir. 1997). "[M]erely conclusory statements or completely insupportable, specious or conflicting explanations or excuses will not suffice" to establish good faith, *Paragon*, 984 F.2d at 1190, nor will "[a] mere denial of intent to mislead (which would defeat every effort to establish inequitable conduct)." *GFI*, 265 F.3d at 1275 (quoting *FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411, 1416 (Fed. Cir. 1987)). Furthermore, where a patentee "has not proffered a credible explanation for the nondisclosure... an inference of deceptive intent may fairly be drawn in the absence of such an explanation." *Bruno Indep. Living*, 394 F.3d at 1354.

V. THE EXPLANATIONS AND JUSTIFICATIONS OFFERED BY AVENTIS AND DR. UZAN

(A.) The Reasonableness Of Comparing Half-Lives Of LMWHs At Dissimilar Doses.

Aventis contends that Dr. Uzan had scientifically valid reasons for not making his half-life comparison at equivalent doses. Specifically, Aventis contends: (1) that Dr. Uzan used clinical benchmarks derived from scientific literature to select doses for the compounds he compared; (2) that this was the only appropriate method for Dr. Uzan to employ given his objective of comparing the clinical properties of a new drug to an old drug; (3) that it was standard practice in the industry to perform dose-ranging

comparisons when studying the properties of different LMWHs; and (4) that it was reasonable for Dr. Uzan to select a 40 mg experimental dose of the Debie product because that dose was approved for a use that presented the greatest challenge in terms of balancing safety and efficacy.

Dr. Uzan's testimony was consistent with these contentions. Dr. Uzan testified that his objective in propounding Example 6 was to compare the LMWHs at their "clinically relevant dose[s]," which he defined as the "dose[s] presenting the best efficacy-safety ratio." He clarified that "for the clinicians there is a balance between efficacy and side effects, mainly bleeding, and so the therapeutic dose, clinically relevant, is a dose for which this safety ratio, including bleeding, is the best." According to Dr. Uzan, "[c]omparing the identical dose is not an appropriate comparison" because a "gravimetric comparison ...has no clinical relevance." The reason that a "comparison in the field of heparin is only valued when you compare clinically relevant dose," Dr. Uzan explained:

is that the low molecular weight heparins are mixtures containing million of saccharides and a very complex composition. And the consequence is that those compounds have, according to this composition, pharmacological, pharmacokinetic, and clinical effects which are composition related. And so clinically it has no sense to compare qualimetric dose... equal quantities, equal amounts in milligram. You cannot do that.

Dr. Uzan further testified to his understanding that, for these reasons, "all the people involved in low molecular heparin compare clinically relevant

dose," and 40 mg was the clinically relevant dose for the indication Dr. Uzan claims to have been focused on—namely, the prevention of deep vein thrombosis ("DVT") in high-risk patients undergoing orthopedic surgery. Dr. Weitz, Aventis' biology expert, testified in support of Dr. Uzan's approach. Although Dr. Weitz condemned Dr. Uzan's failure to identify the Mardiguan EP '144 dose, even suggesting it to have been an unreasonable omission, Dr. Weitz testified that the omission did not affect the validity of Dr. Uzan's half-life comparison. In Dr. Weitz's opinion, Dr. Uzan's "comparison was reasonable because those were the preferred doses of the drugs," and "as clinicians, as doctors, we are only interested in comparing drugs at the doses that have that appropriate benefit-to-risk ratio that—the right efficacy, and the acceptable safety." "As a doctor," Dr. Weitz explained, "I want to know the half-life of a drug at a dose that I am going to use in my patients." Dr. Weitz further testified that "the preferred dose for the high-risk surgical patients [was] 40 mg."

Aventis maintains that Dr. Uzan finds additional support for his clinical justification for selecting 40 mg in scientific articles that compare the pharmacokinetic properties of various LMWHs at their respective—and different—therapeutic doses. Coupled with the fact that no contemporaneous publication studied enoxaparin at 60 mg, Aventis further maintains that these articles prove that Dr. Uzan's clinical rationale comports with the practice of those skilled in the art of LMWHs.

Amphastar and Teva dispute Dr. Uzan and Aventis' contentions, arguing three points: (1) that Dr. Uzan's professed reliance on clinical benchmarks to select an experimental dose is a litigation-inspired

pretext fabricated in order to portray the 40 mg dose as reasonable; (2) that Dr. Uzan and Aventis employed an arbitrary and statistically flawed analytical method in order to cherry-pick the best data and create an artificial impression of significance; and (3) that Aventis adduced insufficient evidence at trial to permit the Court to find any standard practice in the industry to compare LMWHs at their therapeutic, different doses.

It is, however, unnecessary for the Court decide the merits of Amphastar and Teva's particular arguments. Whether selecting the "clinically relevant" dose was scientifically valid given Dr. Uzan's stated objective of comparing the therapeutic properties of a new drug versus an old drug is irrelevant. Whether it is standard practice in the industry of LMWHs to perform dose-ranging comparisons when studying the properties of different LMWHs is irrelevant. Even if the Court accepts both propositions as true, Dr. Uzan's clinical justifications—as he and Aventis have stated them—are implausible under the circumstances of the '618 prosecution and, in that context, fail to persuade the Court that the comparison between different doses was reasonable.

At the heart of Aventis' case for reasonableness is the proposition that Dr. Uzan's objective before the PTO was limited to demonstrating that the claimed LMWH, the Debie '618 formulation, exhibited superior therapeutic properties over a prior art LMWH, the Mardiguian EP '144 formulation, which was known to be compositionally different. The presumption of compositional difference pervades Aventis' case. It was treated as established fact by

every Aventis witness and referenced as such by every Aventis argument.⁷ In post-trial briefing, Aventis argued that "it only makes sense to focus on the clinical dose" when the "objective is to compare the clinical properties of a new drug to an old drug." Dr. Uzan himself testified that "[c]omparing the identical dose is not an appropriate comparison, because ... you cannot compare one kilogram of potatoes to one kilogram of mushrooms."

This metaphor reveals that Dr. Uzan presupposed the very conclusion his half-life analysis sought to prove. Certainly, the use of equal weights of potatoes and mushrooms tells you nothing you do not already know about the properties of potatoes and mushrooms; potatoes taste different than mushrooms, no matter how many of either you eat. The problem for Aventis is that the PE was concerned precisely with the open question of compositional difference: had Aventis claimed a potato or a mushroom, and how ought she to tell the difference?

⁷ For example, the objective of each scientific publication Aventis invites the Court to consider for the industry practice was to compare the biochemical properties of various LMWHs known by prior investigation to be compositionally distinct. Similarly, Dr. Weitz testified that his own research involved, and he has himself personally performed, comparisons of the pharmacological properties of different heparin-based products, including enoxaparin, at different experimental doses because those doses were the preferred clinical doses.

(1.) The Central Objection To Patentability Throughout The '618 Prosecution.

In the First Office Action, the PE observed that EP '144 taught the "instantly claimed sulfated heparinic polysaccharide admixture" and relied on an inherency argument in rejecting the Debie LMWH as anticipated by EP '144. In addition, because the Oestergaard reference taught that LMWH mixtures are "substantially equivalent regardless of the process by which they are obtained," the PE concluded that "it would have been obvious to one of ordinary skill in the art at the time [Debie invented the '618 product] to select any of the well known prior art methods for obtaining a low molecular weight fraction of heparin for the advantage of increased biological activity."

Aventis responded in two ways, first by defining the composition, then by emphasizing its properties. Aventis stated that "[t]he admixture comprises from 9% to 20% of polysaccharide chains having a molecular weight greater than 2,000 daltons and from 5% to 20% of polysaccharide chains having a molecular weight greater than 8,000 daltons, the ratio between the weight average molecular weight and the number average molecular weight thereof ranging from 1.3 to 1.6." Because Mardiguian did not disclose or suggest this particular compositional makeup, and because the properties of LMWHs were said to be highly composition dependent, Aventis argued that Mardiguian did "not permit the production of mixtures possessing the requisite pharmacological properties [to achieve] improved therapeutic applications, namely a sufficiently long plasma half-life." Aventis explained the reason as follows:

Given the fact that the inventive formulations and those of the European patent exhibit different properties, such as half life, it *necessarily follows that the formulations of the invention could not possibly be the same as those of the European patent*. As is notoriously well established, *compounds and their properties are inseparable* and thus, *when two compounds exhibit different properties it follows that they must necessarily be of different structure*. Here, therefore, it should be apparent that formulations as claimed, having significantly improved half lives as compared to the formulations of the European patent, are necessarily different from those of the European patent.⁸ (emphasis added)

Clearly, then, Aventis was well-aware of the PE's concern that the inventive formulation was inherent in EP '144, which is say, that Debie and EP '144 were essentially the same. But Aventis could not successfully distinguish Debie merely by appealing to Debie's ratio of number average and weight

⁸ Aventis argued in closing that Aventis' U.S. patent counsel, Mr. Schulman, went too far here in arguing that the compositions must be different if their properties are different. The Court is at a loss to understand this retreat. It contradicts Dr. Uzan's testimony that the properties of LMWHs are highly composition dependant. More important, if different compositions may not be inferred from different properties, and Aventis could not disprove inherency by virtue of compositional differences alone, then the '618 patent could not be distinguished from EP '144 or overcome the PE's inherency objections.

average molecular weights. The EP '144 patent is not limited by a specific ratio of constituents. Rather, it employs open claim language "comprising various proportions of particular molecular weight products." Therefore, Aventis attacked sameness based on a difference in properties. It also relied on Debie's properties to rebut obviousness. Foreshadowing Dr. Uzan's trial testimony, Aventis maintained that a LMWH mixture's properties vary with its ratio of chemical constituents, and "the crucial step lies in the selection of the combination of lengths which will provide a final product having the combination of desirable properties." Accordingly, because the ratio identified by Debie's LMWH exhibited superior properties over EP '144, the inventive formulation could neither be inherent nor obvious.

The PE was not persuaded. In the Second Office Action, she maintained her rejections. The EP '144 LMWH, she wrote, is "inherently the same as" the claimed invention, as its "composition is so close to the instantly claimed admixtures as to be considered the same, or having differences which are within experimental error." Because the PTO lacks "facilities for testing and comparing various products," she noted that it was incumbent on Aventis to "convincingly demonstrate that the claimed product provides some unexpected or unobvious property not demonstrated by the prior art." The PE further noted that the half-life assertions in Example 6 were not convincing because "the *half life for the EP 40144 product appears to be essentially the same as that for the instant mixtures,*" and "[n]o statistically significant or convincing data which clearly establishes Applicant's assertions has been provided" (emphasis in original).

This signaled to Aventis that its reliance on biochemical properties held promise for overcoming both the PE's inherency and obviousness objections. Aventis relied heavily on Example 6 to respond:

...Example 6 of the originally filed application [] clearly demonstrates that the preparations of Mardiguian are not inherently the same as those currently claimed. In particular, Example 6 clearly demonstrates that the claimed compounds exhibit improved pharmacokinetic properties and, in particular, the products of the invention were found to have a plasma half-life longer than 4-½ hours in 40-45% of the cases where such half-life was observed in accordance with Mardiguian in only 17% of cases. This represents an increase in 250% in half-life. This is very important for a pharmaceutical because such increased half-life enables use of lower dosages of the preparations in accordance with the invention.

In his First Declaration, Dr. Uzan echoed this position, claiming Example 6 "represents an increase in 250% in half-life and is very significant because it enables the same effect to be achieved with lower dosages."

Aventis also used Dr. Uzan's First Declaration to resurrect its argument that compositional differences themselves, rather than the properties asserted by Aventis to be composition dependent, rendered the Debie formulation patentably distinct from EP '144. Dr. Uzan recounted the preparation of a LMWH product using the process disclosed by Mardiguian. He claimed that the resulting LMWH had "21% of chains having a molecular weight lower than 2,000;

6% of chains having a molecular weight greater than 8,000 and 73% of chains having a molecular weight between 2,000 and 8,000." Accordingly, Dr. Uzan concluded that "the formulations of Mardiguian [were] clearly outside the scope of the present invention."

The PE remained skeptical. In the Third Office Action, she observed that "the differences in composition between the instant product and the Mardiguian formulation are minimal." Aventis had "failed to demonstrate that such minor differences render the instant invention patentably distinct over the prior art," especially "because [Aventis] ha[d] not provided evidence of any unexpected results." Rejecting Aventis' and Dr. Uzan's respective assertions about the import of Example 6, the PE concluded that Aventis had still:

...failed to provide evidence that the alleged difference between the half life of the Mardiguian product and that of the instant mixture is statistically significant. Specifically, with regard to Example 6, [Aventis] states neither the number of volunteers in the first study nor their overall physical condition. No data which clearly and convincingly establishes [Aventis'] assertions in a statistically significant way.

Thus, by this point in the prosecution, the Debie formulation stood rejected both as anticipated by, and obvious in light of, Mardiguian EP '144. Aventis had yet to successfully rebut either objection. The PE had required Aventis to come forward with clear evidence that the compositions were different, but Aventis' second attempt to prove the Debie LMWH was chemically distinct from EP '144 based on their

compositional differences had failed. The PE had flagged her willingness to accept evidence of statistically significant differences in pharmacokinetic properties as indirect proof of compositional difference sufficient to disprove inherency, but Aventis had not made the requisite showing.

Aventis argues that by the time of Dr. Uzan's Second Declaration, the PE had acknowledged that the Debie product was different from EP '144 by dropping her anticipation rejection under 35 U.S.C. § 102. In a Supplemental Response following the Third Office Action, but preceding Dr. Uzan's Second Declaration, Aventis claims that, "as the Patent Office makes only a rejection under 35 U.S.C. § 103 [in the Third Office Action], it is beyond dispute that the Patent Office does not view the claimed preparations as being inherent." Aventis went on: "Indeed, the [First] Declaration previously submitted by applicant refutes such inherency ... [and] ... [i]t being a given, therefore, that the claimed preparations are not inherent, the next questions is whether they would have been obvious" In effect, Aventis simply declared victory on inherency and proceeded to argue nonobviousness. This strategic shift is reflected in Dr. Uzan's Second Declaration. Whereas Dr. Uzan repeatedly asserted in his First Declaration that the data presented in Example 6 and elsewhere conclusively established a patentable difference, he interpreted the same data in his Second Declaration solely in terms of the Debie composition's properties.

There is no need to debate the PE's references to the Patent Act.⁹ The Third Office Action explicitly rejects Aventis' attempt to prove its claimed LMWH was chemically distinct from EP '144 based on compositional differences. The PE wrote that "[t]he recited properties of bioavailability and antithrombotic activity are considered to be inherent in the prior art," while "[n]o evidence has been presented which clearly and convincingly demonstrates that the instant compounds would provide any properties or activities not necessarily inherent to the prior art compounds." Moreover, the PE's handwritten Interview Summary Record, dated several months after the Third Office Action, records that "[a]nother declaration will be submitted...to further indicate how the claimed invention distinguishes over the Mardiguian reference." These statements would make little sense if, by this stage, the PE had already concluded that the claimed preparations were not inherent. Thus, the central question throughout the prosecution of the '618 patent was whether the Debie and Mardiguian EP '144 LMWH products were compositionally different.¹⁰ Even if the Court were to accept as true

⁹ *But see* the Third Office Action, in which the PE restated her rejections over Mardiguian under 35 U.S.C. § 103 without expressly restating them under 35 U.S.C. § 102, but at no time actually withdrew her rejections over Mardiguian under 35 U.S.C. § 102. Not having been withdrawn, those anticipation rejections over Mardiguian were technically still pending. Thus, Aventis' argument based on the PE's citations to the Patent Act is specious.

¹⁰ Here, the issue of obviousness necessarily folds into, and is subsumed, by inherency. Evidence of statistically

Aventis' unlikely contention that, by the time of Dr. Uzan's Second Declaration, the PE had conceded that the Debie and EP '144 products were different, there can be no question that inherency was the central, dispositive question up to that point.

(2.) The Adequacy Of Dr. Uzan's Method For Demonstrating Compositional Difference: Composition-Effect Indistinguishable From Dose-Effect.

Aventis' and Amphastar's experts agreed that, where the objective of a pharmacokinetic analysis is to establish that two LMWH products, or any

[Footnote continued from previous page]

significant differences in pharmacokinetic properties between Debie and EP '144 sufficient to disprove sameness would also be sufficient to prove nonobviousness. In addition, when dealing with LMWHs, the concept of obviousness presents conceptual difficulties. Aventis maintains that a LMWH's ratio between weight average molecular weight and number average molecular weight defines its properties, and the inventive insight comes in recognizing when a specific ratio promises improved therapeutic properties over the prior art. The dilemma arises because, as argued *infra*, a LMWH's therapeutic properties may not always be determinable until the LMWH has been identified as compositionally distinct from the prior art. Obviousness, in such a case, presupposes a determination, one way or another, about inherency. Yet, this may render obviousness impossible in every case: a beneficial property can never be obvious to a person of ordinary skill in the art when a LMWH is invented if that skilled person cannot know the property is beneficial until after the LMWH is invented. Accordingly, it is more helpful to examine this case through the lens of inherency.

chemical compounds, are compositionally different, a dose-ranging experimental design is inappropriate. The reason is that, if prior experimentation has not conclusively established the two formulations as chemically distinct, any observed differences in pharmacokinetic properties, including half-life, could be explained either by a difference in experimental dose or a difference in the compositions.

Amphastar's pharmacology expert, Dr. Boons, testified that valid experimental design asks one scientific question at a time and keeps all other parameters the same. That way "one can arrive at conclusions whether [the] two preparations have different or the same pharmacokinetic properties." Dr. Boons observed: "[I]f one has two heparinic preparations and one wants to establish that they were not the same, that one is different and has superior properties in this case as measured by anti-X_a activity, one has to keep everything the same except the two preparations. If one then observes a difference, that can then be attributed to the two different preparations."

Aventis' own medical expert, Dr. Weitz, corroborated Dr. Boon's view. When asked on cross examination why he would not want to control all the experimental confounds—or "noise," as he put it—in his experimental design, Dr. Weitz at first hesitated, then responded:

I mean, I think it depends. If you are trying to compare a pharmacokinetic parameter of two *different* drugs when they are used at the clinically relevant doses, then you don't care about that control [of holding the dose constant]. What you want to do is you want to see what that parameter is at the dose

that you are going to use in the clinic.
(emphasis added)

In other words, Dr. Weitz understood Dr. Uzan's different-dose comparison to be directed at a much narrower scientific question than the PE had actually posed to Aventis and Dr. Uzan. Dr. Weitz testified that Example 6 "wasn't being offered for the purpose of showing that the two drugs were different." Rather, Dr. Weitz understood Example 6 and Dr. Uzan's representations to the PTO about its significance to have been directed at the question whether the half-life of the Debie product at 40 mg was more effective for the prevention of DVT in patients undergoing high-risk orthopedic surgery than the half-life of the Mardiguan product at 60 mg when used for the same purpose.

Dr. Weitz testified that "there was evidence that [the Debie and Mardiguan products] were different compositions." For justification, he referred to Dr. Uzan's statement in the First Declaration "that the molecular weight distributions of the claimed product are different from the molecular weight distribution of the prior art product." Dr. Weitz further admitted that his entire testimony was based on this assumption of chemical compositional difference. Therefore, the validity of the testimony of Aventis' sole expert is by his own admission predicated on evidence Dr. Uzan offered to the PE to establish a proposition (compositional difference)

that the PE found insufficient to support that proposition.¹¹

Dr. Weitz's testimony is still relevant, however, insofar as it goes to the reasonableness of Dr. Uzan's comparison for the scientific purpose Dr. Uzan was actually making it. When Teva's counsel clarified her question as directed at the intrinsic pharmacokinetic properties of the claimed formulation, not its relative efficacy in the clinic for a particular purpose at a particular dose, Dr. Weitz hesitated again, then retreated:

¹¹ Note that the Court is not now considering the question of whether the compositions used in the various studies underlying Example 6 are, in fact, chemically different from each other. Nor is the court concluding whether, as a matter of law before the PTO, Aventis submitted sufficient evidence to establish the same. Rather, the Court makes two observations: (1) because of the chemical nature of LMWHs as heterogeneous mixtures of polysaccharide molecules of varying lengths and weights in defined ratios, the question of compositional difference between two LMWH's is question of law for the PTO—which is to say, the issue is not compositional difference but patentable compositional difference; and (2) whether Dr. Weitz was correct to believe that the Debie and Mardiguian products are compositionally different, or even that they are in fact patentably compositionally different, is irrelevant. Dr. Weitz's testimony is contingent on the PE's acceptance of Debie and Mardiguian as patentably compositionally different based on Dr. Uzan's First Declaration. This the PE did not do. Thus, Dr. Weitz's testimony on the reasonableness of Dr. Uzan's comparison at different doses can be disregarded.

I think if you were trying to show that one product was different in composition from the other, and you want to show whether that difference in composition—you know, whether—sorry. If you want to show that a product is different from another, you might—you might compare them head to head at the same dose.

Even the inventor of the '618 patent, Mr. Debie, confirmed that a head-to-head comparison is essential when it is the nature and not the uses of a compound being studied.¹²

Accordingly, the Court finds that Dr. Uzan's clinical justification for his different-dose comparison is unreasonable, because Dr. Uzan's experimental design is unconnected to and inconsistent with his true experimental purpose. Aventis cannot disprove sameness broadly with a methodology calculated only to show utility narrowly. Dr. Uzan's comparison cannot show that enoxaparin is compositionally different than Mardiguian at any dose. Nor can it show that enoxaparin, *per se*, as opposed to "enoxaparin-at-40-mg-for-DVT," is superior to

¹² He testified that "[i]f the tests performed and reported under Subparagraph 3 were not done under the same conditions as those referred to in Paragraph 1, this has no meaning" and "is worthless." Dr. Uzan faults Mr. Debie for being a chemist who is "not aware about biology," but Mr. Debie's discipline is immaterial. A professional chemist studying LMWHs certainly knows the importance of holding all parameters constant except the independent variable (the formulation) and the dependant variable (half-life).

Mardiguian, *per se*, as opposed to “Mardiguian—at-60-mg—for-DVT.” At best, Dr. Uzan’s comparison can illustrate—and the Court here makes no finding that it does—that enoxaparin at 40 mg is superior to Mardiguian EP ’144 at 60 mg for preventing DVT in high-risk orthopedic surgery. The uncontrolled, confounding variable of dose renders any more expansive conclusions based on Dr. Uzan’s comparison meaningless.

(3.) *The Adequacy Of Dr. Uzan’s Methodology Presuming Dose-Independence: Uncontrolled Variability.*

Aventis argues that because the half-lives of the LMWHs are dose-independent—i.e., as dosage varies, half-life does not vary in a statistically significant way—it was reasonable for Dr. Uzan to select any dose from the Duchier study, from which he drew the 40 mg half-life data for Example 6. However, any composition-effect remains indistinguishable from a possible dose-effect in this case, because the evidence did not establish dose-independence. Aventis never attempted to convince the PTO or argue to the Court on this point, either for the ’618 or the EP ’144 products. The Duchier study suggests but does not prove dose-independence because, as Dr. Boons reported, a study including a much larger subject group than twelve could reveal statistically significant differences in the mean half-lives between different doses. The Fouquet study, from which Dr. Uzan drew the EP ’144 data for Example 6, tested only 60 mg doses of EP ’144. As designed, Fouquet was incapable of showing dose-independence of the EP ’144 LMWH. Thus, assuming *arguendo* that the Court finds credible Aventis and Dr. Uzan’s contention that Dr. Uzan had

no choice but to use 60 mg data for the Mardiguan EP '144 LMWH because the Fouquet study tested only 60 mg doses and that was the only study Dr. Uzan was aware of reporting half-life data for an EP '144 LMWH, it would still not have justified Dr. Uzan's belief that the half-life of EP '144 was dose-independent.

This uncertainty rules out a 40 mg to 60 mg comparison; as testified to by Dr. Boons, only a 60 mg to 60 mg comparison could have possibly been reasonable. However, even if the LMWHs do, in fact, have dose-independent half-lives, and even if Dr. Uzan knew this to be true, his dose-ranging comparison was still unreasonable.

(a.) Dose-Independence Of The '618 LMWH.

The Duchier study involved measuring the half-life of enoxaparin in 12 individuals at four doses: 20, 40, 60, and 80 mg. In theory, and other things being equal, if the half-life of the '618 enoxaparin was dose-independent, the observed half-lives at each dose should have been virtually identical. Aventis' position is essentially that Dr. Uzan was reasonable in picking the 40 mg dose because dose-independence renders the data from each dose interchangeable. If so, Aventis does not explain how, if 40 mg could be substituted for 60 mg, the half-life improvement over EP '144 was significant at 40 mg but not at 60 mg. The reason is that, in practice, variability between subjects (between the 12 subjects at a given dose) ("inter-subject variability") and variability within each subject (within the four doses tested in every subject) ("intra-subject variability") results in differences in the observed half-life values along Duchier's 20 to 80 mg dose range. Aventis did not give the PE sufficient information to assess the

impact of this variability, a fact about which she complained in the Third Office Action, observing that Aventis "state[d] neither the number of volunteers in the first study nor their overall physical condition."¹³

Although the half-lives exhibited by each of Duchier's subjects along the full 20 to 80 mg dose range were insignificantly different in themselves, they were not interchangeable. The Duchier data revealed a relatively high intra-subject variability. Because the Duchier study used a crossover model, this cannot easily be explained as a subject effect.¹⁴ Rather, the noise within subjects may have been random or caused by uncontrolled factors of which the Court is unaware: e.g., off- or on-protocol differences in the manner or time of the application of the investigational drug, variations in the site of injection, changing medical personnel giving the injection, or behavior changes in individual subjects from one administration to the next. Although the

¹³ In his Second Declaration, Dr. Uzan responded by attempting to reduce the influence of *inter*-subject variability on his comparison. He averaged the half-lives of Duchier's twelve subjects at the 40 mg dose, and, separately, he averaged the half-lives of Fouquet's twelve subjects at the 60 mg dose. It is undisputed, however, that Dr. Uzan, in using only the Duchier 40 mg dose, never accounted for *infra*-subject variability.

¹⁴ This is because intra-subject variability is a function of geno- and phenotypic differences between individuals. Different people respond differently to the same drug; however, without knowing more, the same individuals would not be expected to respond differently to different administrations of the same drug over a short period of time.

slope of this noise was effectively flat across individual subjects, suggesting the absence of a dose effect, it was nevertheless large enough to overwhelm a composition effect when the '618 and EP '144 LMWHs were compared. This explains how, notwithstanding dose-independence, the mean of the 40 mg dose of the '618 product compared to the mean of the 60 mg dose of EP '144 could appear statistically significantly different, while the 60 mg dose of the '618 product did not. Put simply, the noise in the Duchier system swallowed the signal in the Duchier-Mardiguan comparison. Accordingly, even were the half-life of the Debie enoxaparin dose-independent, Dr. Uzan's different-dose comparison was still incapable of distinguishing between differences in the plasma half-life of the Debie and Mardiguan products caused by differences in their chemical compositions, as opposed to uncontrolled intra-subject variability.

The experts offered by Amphastar, Teva, and Aventis each advocated different methods by which this intra-subject variability might have been controlled.¹⁵ The Court finds that the methods of

¹⁵ Dr. Buller favored incorporating all the data points from each of Duchier's twelve subjects at each of the four experiment doses: 20, 40, 60, and 80 mg. Where half-life is independent of dose, the real obstacle to controlling this variability is simply insufficient numbers of observations; thus, Dr. Buller would have used as many observations as were available. Neither Dr. Weitz nor Dr. Boons, by contrast, believe it is necessary or appropriate to consider all the data points; however, if this was to be done, each disagreed with Dr. Buller and favored an alternative method for doing so. Dr. Weitz would determine the mean half-life for each subject by averaging the half-life

Drs. Buller and Boons target and, theoretically, ought to arrive at approximately the same result. Dr. Weitz's method should control intra-subject variance somewhat less well. But, whether Drs. Buller, Boons, or Weitz is ultimately correct is not dispositive, because the problem of intra-subject variability affects experimental efforts to determine the plasma anti- X_a activity and half-life curves of the Mardiguan LMWH just as it does the Debrine enoxaparin.

(b.) Dose-Independence Of The EP '144 LMWH. Even if the EP '144 LMWH was also dose-independent and Dr. Uzan had, in fact, controlled for intrasubject variability in the Duchier data, the reasonableness of Dr. Uzan's methodology does not markedly improve. In Duchier, intra-subject variability was observed across four administrations. In Fouquet, it was unexpressed, because there was only a single administration of EP '144 per subject, but it was no less inherent in Fouquet than Duchier. Had Fouquet made multiple observations of EP '144 in every subject, even at the same dose, the same randomness or hidden confounds creating noise in the Duchier data may well have produced variable half-life values across observations within Fouquet's subjects. At that point, any of the methods proposed

[Footnote continued from previous page]

values observed along the full dose range and then taking the mean of those means. Dr. Boons, on the other hand, would weight the means of each subject's observed half-life along the dose range according to the standard deviations of those means, which attempts to account for the variability within each subject.

by the experts in this case could have been used to control this variability and increase confidence that any statistically significant differences in half-life observed when the '618 and EP '144 products were compared were signal, not noise, and could therefore be offered as valid indirect evidence of compositional difference between the LMWH products. Fouquet did not make multiple observations, however, and given the specter of unknown, unexpressed, and uncontrolled noise in the Fouquet data that the Duchier data raises, Dr. Uzan's total reliance on the Fouquet study would still have prevented the PE from separating signal from noise.

Thus, under the most favorable assumptions for Aventis possible, it may well have been scientifically impossible for Aventis to clearly and convincingly demonstrate compositional difference. To be certain, controlling intra-subject variability in the Duchier data might have been Aventis' best option for convincing the PTO of non-inherency. The PE may even have deemed this sufficient, notwithstanding the lingering worry about Fouquet. But there is still no dispute: both studies suffer from intra-subject variability, and Dr. Uzan compared them without even attempting to control the noise in the Duchier data, rendering his analysis all the more unreasonable.

(B.) The Credibility Of Dr. Uzan's Clinical-Relevance Justification.

Aventis does not dispute that there is no statistically significant difference between the two compounds' half-lives at the same dose (60 mg). Nor does it contest that there was no statistical difference between Debie at 20 mg and 80 mg versus EP '144 at 60 mg. *Only the 40 mg dose showed a statistically*

significant difference over EP '144. This gives rise to the natural inference that Aventis sought to achieve by hindsight the appearance of a statistically significant difference where none actually existed; that Aventis and Dr. Uzan engaged in a post-hoc analysis of the Duchier data, "cherry-picked" the one dose permitting a favorable comparison to Mardiguan, and developed in retrospect an analytical framework within which the use of this dose could be rationalized. Even if the Court is mistaken and a comparison at dissimilar doses is in some way scientifically capable of addressing inherency, the reasonableness of Dr. Uzan's comparison also depends on the credibility of his clinical-relevance justification. If it is credible, Dr. Uzan's use of the only dose showing a difference in half-life is reasonable under the clinical relevance model only if 40 mg was the only clinically relevant dose. The evidence does not establish that it was.

First, clinical efficacy was rarely, if ever, the endpoint of Dr. Uzan's work. Dr. Uzan was not a practicing medical doctor regularly engaged in clinical research with human subjects. He testified to being a "pharmacologist and a biologist" primarily engaged in preclinical animal studies using rabbits and "*in vitro* test[s]."

Second, the '618 patent was not limited to the safe and effective doses for particular therapeutic indications. Claim 1 claims a chemical composition broadly. The '618 patent represents that beneficial properties, including a "sufficiently long plasma half-life, a fairly high absorption rate, a high bioavailability or, alternatively, a low clearance," inhere in the claimed composition *per se*, not according to clinical usage. It also represents that

"the mixtures thereby obtained have a favorable ratio of the fractions of high to those of low molecular weights, which endows them with the requisite antithrombotic properties with but slight risk of hemorrhagic effect." Yet, Dr. Uzan's clinical rationale for the use of the 40 mg dose relies on unsafe and "excessive bleeding" caused by the 60 mg dose. Further, the title of the patent itself covers both treatment and prevention: "Mixtures of Particular LMW Heparinic Polysaccharides for the Prophylaxis/Treatment of Acute Thrombotic Events." Nowhere does the patent disclose that the claimed compound is unsafe or not useful at certain doses or for any of its claimed (or possible) indications.

Aventis maintains that it is irrelevant to Dr. Uzan's intent that the '618 patent covers all doses and indications other than the prevention of DVT in high-risk surgery, arguing that Dr. Uzan need not have been concerned with indications approved after he prepared Example 6 because his subsequent declarations merely "fleshed out that original comparison." This ignores the broad coverage of the '618 patent, fails to recognize that future approvals for additional indications were eminently foreseeable, and ignores the fact that Dr. Uzan's duty of disclosure extended not only through the filing of his First and Second Declarations, but throughout the '618 patent's entire prosecution history. See *Fox Indus., Inc. v. Structural Preservation Sys., Inc.*, 922 F.2d 801, 803 (Fed. Cir. 1990); *Union Oil Co. of Cal. v. Atlantic Richfield Co.*, 34 F. Supp. 2d 1208, 1211 n.1 (C.D. Cal. 1998).

Aventis also contends that Dr. Uzan's focus on the "single breakthrough use of [its] new product" legitimately supported patentability, citing *In re*

Chupp, 816 F.2d 643, 646 (Fed. Cir. 1987), for the proposition that “[t]o be patentable, a compound need not excel over prior art compounds in all common properties.” *Chupp* is inapposite. *Chupp* involved a claimed compound that exhibited superior herbicidal activity on only some of the crops with which it could be used. The Federal Circuit held that evidence of this unexpectedly but selectively superior performance was sufficient to rebut a *prima facie* case of obviousness. In this case, anticipation/inherency are at issue as much or more than obviousness. More substantively, although Dr. Weitz testified that the “big advance” enoxaparin “provided was in the high-risk patients, the patients undergoing orthopedic surgery,” he described this as “a big advance over unfractionated heparin.” Yet, whether the ’618 patent was a breakthrough over the EP ’144 prior art was the question before the PE. Under *Chupp*, Aventis could secure a patent on a LMWH even if that LMWH was only superior to the prior art in certain properties at certain doses for certain indications. But Aventis’ reliance on *Chupp* begs the question of whether the ’618 LMWH is, in fact, superior to the EP ’144 LMWH prior art *in any property at any dose for any indication*—and is sufficiently so to prove both compositional difference and nonobviousness. The evidence suggests that only a same-dose comparison could have answered that question.

Because the ’618 LMWH was not a breakthrough in preventing DVT in high-risk patients undergoing orthopedic surgery as compared to the prior art LMWHs that were blocking patentability, Dr. Uzan’s exclusive focus on this indication is that much harder to explain and impossible to justify. Dr. Uzan’s entire clinical-relevance rationale begins to

collapse with evidence that there were a variety of preferred therapeutic doses at the time, depending on the indication. The record reflects, for example: (1) that a 20 mg dose was approved in France in 1987 for prophylaxis in general surgical patients; (2) that a twice-daily 30 mg dose for prophylaxis in high-risk surgical patients was commonly known to be under investigation in North America in the early 1990s, and it secured formal approval in 1993; (3) that a treatment dose of 1 mg/kg—or 80 mg/175 lbs—was approved in France in 1991¹⁶; and (4) that a 20 mg dose had been approved in 1987 in France for the prevention of DVT in general and orthopedic surgery. It is implausible that an animal biologist attempting to prove compositional difference focused on the clinical dose for an indication nowhere mentioned prior to trial to support a patent broader than this indication because the claimed invention was a breakthrough over a drug not blocking patentability.

Finally, Aventis offered no corroborating evidence of Dr. Uzan's clinical-relevance justification whatsoever. Neither the '315 application nor any document submitted to the PTO during the prosecution of the '618 patent anywhere refers to the concepts of "preferred therapeutic dose," "clinically relevant dose," or prophylaxis of DVT in high-risk orthopedic surgery. Aventis also did not offer the testimony of a single percipient witness to verify Dr.

¹⁶ There can be no question that Dr. Uzan knew, at least, of the 1 mg/kg treatment dose; he himself authored the toxicology and pharmacology reports in 1990 supporting its approval.

Uzan's account.¹⁷ The Court cannot escape the conclusion that Dr. Uzan's clinical-relevance justification for the Debie 40 mg dose may find no corroboration because it cannot *be* corroborated, and Dr. Uzan's reliance on it may not have predated the present litigation.

(C.) *The Implausibility Of Inadvertence.*

Amphastar and Teva having established a *prima facie* case of intent, it fell to Aventis to come forward with facts supporting a plausible explanation or excuse justifying Aventis and Dr. Uzan's highly material omissions. The Federal Circuit tied the reasonableness of Dr. Uzan's comparison to Dr. Uzan's excuse of inadvertence. It held evidence of the former would be probative of the latter. This is

¹⁷ The record establishes that patent agents, Michelle Morvan and Phillippe Becker, and their supervisor in the Aventis Patent Department, Jacques Savina, were involved in the '618 prosecution. Ms. Morvan was the Aventis Patent Department's heparin expert and the patent agent then in charge of heparin-based products. Mr. Becker drafted the French application which formed the basis for the '618 patent, and the evidence suggests he may have been the true author of Dr. Uzan's First Declaration. Ms. Morvan and Mr. Becker were both involved to differing degrees in documenting Mr. Debie's alleged invention, drafting the '315 application, and prosecuting the '618 patent. Similarly, Mr. Savina was the head of the patent department with direct supervisory responsibility for the enoxaparin file. Each testified during their depositions that they failed to recall a single relevant detail concerning the prosecution history: not about Example 6; not about the doses used in the Fouquet study; not about the First or Second Declaration; and not about the half-life comparisons stressed to the PE.

why trial testimony dealt so extensively with the science behind Dr. Uzan's analysis: because even "gross negligence is not, in and of itself, sufficient to satisfy the intent element of inequitable conduct." *Ulead Sys.*, 351 F.3d at 1148. Because Dr. Uzan's testimony cannot explain his comparison as reasonable, the Court can now only look to Dr. Uzan's naked assertion that his failure to disclose the Mardiguian dose was inadvertent. He claims that the Mardiguian dose "did not come in [his] mind," that its omission was "pure inadvertence," and Aventis argues that inadvertence amounts to gross negligence, which cannot justify an inference of intent under *Kingsdown*. See 863 F.2d at 876.

However, a bare declaration of gross negligence cannot evidence a lack of intent to mislead. *Paragon*, 984 F.2d at 1191; *Univ. of W. Va. v. Vanvoorhies*, 278 F.3d 1288, 1299 (Fed. Cir. 2002). Dr. Uzan has done little more than make a conclusory denial in a pleading. Certainly, if Dr. Uzan's failures of disclosure were unintentional, they could be nothing else but grossly negligent. But for the Court to find that Dr. Uzan's omissions were based on gross negligence, it must be plausible under the facts and circumstances of this case that Dr. Uzan could, in fact, have been grossly negligent. It is not—entirely the opposite.

(1.) *The Impressive Qualifications Of Dr. Uzan.*

Aventis contends that Dr. Uzan is a world-class scientific mind whose reputation is wholly inconsistent with deceptive intent. The Court agrees that he is a world-class scientist but finds this fact irrelevant to his intent. Dr. Uzan's reputation is wholly inconsistent, not with deceptive intent, but

with negligence—especially negligence of the magnitude that would have had to have been committed here. The evidence shows that Dr. Uzan received training in numerous scientific fields, including but not limited to biological chemistry, coprology, parasitology, serology, hematology, microbiology, physiology, and Human Biological Research. The evidence reflects his current membership in numerous professional organizations, including but not limited to the French Society of Therapeutic and Clinical Pharmacology, France's National Academy of Pharmacy and Society of Biological Chemistry, the International Society of Biochemical Pharmacology, the American Society for Neurosciences, the European Neuroscience Association, the British Pharmacological Society, and The New York Academy of Sciences. Dr. Uzan is also a former member of France's National Center for Scientific Research Commission No. 25. In his nearly fifty-year history with Aventis, Dr. Uzan has published, by his count, over 350 scientific articles, received frequent appointments as an expert, including by the Paris Court of Appeals, and held at least four separate CEO or Director-level posts in the company. In 1983, he received the International Prix Galien, an internationally recognized award within the pharmaceutical industry recognizing innovation in drug discovery.

In addition, Dr. Uzan testified to having been recently elevated to the grade of Légion d'honneur, or Knight of the Honor Légion, by France's President, Jacques Chirac. Dr. Uzan explained that admittance is the highest honor in France, one conferred for outstanding achievements that improve the image of France domestically or abroad.

(2.) *What Dr. Uzan Knew, Must Have Known, And Should Have Known.*

Unsupported by more, it simply is not credible that a scientist of Dr. Uzan's caliber and distinction could have committed—and then repeatedly failed to correct over such a long period of time—errors as egregious as those in the '618 prosecution. The prosecution history of the '618 patent unambiguously reflects that evidence of a difference in properties sufficient to prove compositional difference and overcome the PE's inherency objections (and, necessarily, her obviousness objections, as well) was Dr. Uzan's goal. It is inconceivable that this fact was unclear to Dr. Uzan. The language of his First Declaration involves multiple assertions of compositional difference, and in it, Dr. Uzan declares his familiarity with the Second Office Action, which expressly rejected the '618 LMWH as anticipated by Mardiguian, stating that Aventis had not shown "any patentable distinction" between the two, and that the '618 product's claimed properties were "inherent since the prior art compounds [were] considered the same." The Second Declaration's abrupt shift in tone away from the language of difference supports the inference that Dr. Uzan was kept aware of the PTO's evolving objections throughout the prosecution. It also demonstrates that Dr. Uzan knew the problem of insufficient proof of statistical significance was among those objections. Moreover, cases from *Ferring* to *Critikon* to *Brasseler* acknowledge that the Court may consider what he who failed to supply highly material information should have known about the

information's materiality.¹⁸ Even a deeply conservative account of what Dr. Uzan should have known must include knowledge of the PE's central objection to patentability. After all, Aventis can scarcely disagree that Dr. Uzan ought to have been aware of the nature of the questions he was called on to answer before the PTO.

Yet, Dr. Uzan still compared the half-lives of the '618 and EP '144 LMWH's at different doses. At trial, he admitted to doing this knowingly. (*See* 12/4 Tr. 85:8-86:19; 143:8-11.) Because Dr. Uzan must (and should) have known what experimental question he was answering, and because Dr. Uzan clearly did know what experimental design he was using to do so, it is inconceivable that a scientist of Dr. Uzan's abilities could have simply overlooked the fundamental scientific mismatch between what his comparison was required to show, to satisfy the PTO, and what it could show, scientifically. Dr. Uzan had no way of knowing if the EP '144 LMWH possessed a

¹⁸ Contrary to Aventis' arguments, it is well-established that proof of actual knowledge is not always necessarily required. *See Ferring*, 437 F.3d at 1191 (holding summary judgment on intent is appropriate where, among other things, "the applicant knew or should have known of the materiality of the information" not disclosed); *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1376 (Fed. Cir. 2001) ("intent may be inferred where a patent applicant knew, or should have known, that withheld information could be material to the PTO's consideration of the patent application"); *Critikon*, 120 F.3d at 1256-57 (holding that a patentee's failure to appreciate the legal significance of the facts that it failed to disclose did not absolve it of its duty to disclose).

dose-independent half-life. His asserted subjective belief that the '618 product was so possessed was based on too few observations to be reliable. If either or both LMWHs do not, Dr. Uzan's comparison of half-lives at different doses is logically and statistically incapable of proving compositional difference. What is more, since it cannot distinguish a composition-effect from a dose-effect, his comparison is incapable of proving anything at all about the relative half-lives of the '618 and EP '144 LMWHs, *per se*, despite the claim of the '618 patent to enoxaparin, *per se*. Even if the EP '144 and '618 LMWHs do, in fact, have dose-independent half-lives, Dr. Uzan's experimental design is no less handicapped, as it fails to control for high, random intra-subject variability in the Duchier data, and it ignores the risk of uncontrollable intra-subject variability lying dormant in the Fouquet data.

Notwithstanding such weaknesses, Dr. Uzan represented in his declarations to the PTO, in essence, that the claimed LMWH exhibited, at any dose, a statistically significant increase in half-life over the Mardiguian LMWH, at any dose. He further represented that this would enable the use of lower doses in the clinic compared to Mardiguian, and that it proved the Mardiguian LMWH was different from the '618 LMWH. Put simply, Dr. Uzan knowingly gave the PE a narrow answer to her broad question, and then represented that in so doing he had answered her question broadly. It strains credulity to suggest that a scientist of Dr. Uzan's skills and experience could have relied on logic so flawed purely by accident. That a figure such as Dr. Uzan also could have inadvertently failed to notice his error and taken steps to cure it over five

years of involvement in the '618 prosecution is difficult for the Court to accept.

(3.) *The Absence Of Clues To Negligence.*

Had it truly been inadvertence causing Dr. Uzan's unreasonable comparison and related misstatements, the Court would expect to see clues to his negligence throughout the prosecution. Yet, virtually no red flags appear in the relevant history.¹⁹ At no time did Aventis or Dr. Uzan disclose any fact to the PTO even *reflecting* that a 60 mg dose of the Mardiguian EP '144 LMWH was compared, or that a dose-ranging comparison had been made. Aventis' own expert testified that this was a scientifically unreasonable omission. His view is confirmed by every publication Aventis invites the Court to consider for the industry practice; each one fully discloses what doses are under investigation. Indeed, the Court would be most surprised if a single

¹⁹ Aventis argues that the submission of the Duchier study's 60 mg dosage information for the Debie formulation was such a flag to the PE. This argument is of no moment. While the inclusion of Duchier data for two doses in subparagraph (1) might have spurred the PE to ask what dose was used in subparagraphs (2) and (3), Aventis' led the PE away from any inclination to do so by stating that both the 60 mg and the 40 mg dose in subparagraph (1) involved 75% of subjects exhibiting half-lives above four hours, thereby conveying the erroneous impression of practical equivalence between the 60 mg and 40 mg Duchier doses and irrelevance of dose to the comparison to EP '144. Moreover, as the Federal Circuit reasoned, the inclusion of this data might militate toward a finding of intent because it shows Dr. Uzan was aware of the importance of the 60 mg dose.

article among Dr. Uzan's threehundred-plus publications survived peer review without extensive description of its experimental protocol and analytical methods, in addition to the inclusion of the basic summary statistics omitted from the First Declaration.

Aventis and Dr. Uzan also failed to disclose or represent to the PTO: (1) that the single-dose Fouquet study was the sole source of available data on the EP '144 LMWH; (2) that a dose-ranging analysis was used; (3) that Dr. Uzan's exclusive analytical focus was on the prevention of DVT in high-risk patients undergoing orthopedic surgery; (4) that Dr. Uzan selected his experimental dose of the '618 LMWH because it was the "preferred therapeutic dose" or the "clinically relevant dose" for that indication; (5) that the half-lives of the Debie and Mardiguan products were believed to be dose-independent; or (6) that Example 6 was a not a well-controlled prospective trial, but a meta-analysis comparing data from three different studies performed for three different purposes at three different times, each more than four years before the filing of the patent application. Had Aventis or Dr. Uzan disclosed even one of these facts, it may well have ignited the PE's suspicion, increasing the probability that Dr. Uzan's flawed, dose-ranging study design would have been exposed. Had they all been stated, Dr. Uzan's gross negligence excuse could be viewed more credibly. Where, as here, *none* surfaced anywhere in the application, declarations, or written arguments, inadvertence is simply implausible. Consistently omitting so many references involves the application of diligence, not the commission of negligence.

In summary, the purpose of trying the issue of Dr. Uzan's intent was to afford Aventis the opportunity to substantiate factually the reasonableness of any excuse that Aventis claims for Dr. Uzan's material omissions. The state of the record in this regard is much improved over summary judgment. First, Defendants have clearly and convincingly established that Dr. Uzan's comparison at dissimilar doses was scientifically unreasonable. It could not prove anything the PE wanted to know. Second, Dr. Uzan's clinical-relevance justification did not withstand scrutiny. Dr. Uzan tested a clinically relevant dose for an important indication; however, 40 mg was not enoxaparin's only clinically relevant dose; the prevention of DVT was not its only important indication; and, in any event, the patent's reach was never limited by dose or indication. Third, other things being equal, the errors of omission in the '618 prosecution were errors that a "Dr. Uzan" simply would not have made. They were too egregious, too obvious, and too consistently committed over too long a period of time. The Court may not presume for Aventis' benefit that Dr. Uzan committed uncharacteristic errors of omission that concealed, purely coincidentally, experimental design mistakes that Dr. Uzan's training, skills, and experience strongly suggest he could have never accidentally made, but which were essential for him to make if Aventis was to overcome the PTO's objections to patentability.

**VI. THE FACTS AND CIRCUMSTANCES
SURROUNDING AVENTIS AND DR.
UZAN'S FAILURE TO DISCLOSE
MATERIAL INFORMATION**

A *prima facie* case of deceptive intent has already been made. A strong inference that Dr. Uzan intended to deceive is reasonable. This is law of the case established by two prior courts. Having rejected Dr. Uzan's excuses, the Court need not revisit it a third time. Nevertheless, because affirmatively proving intent is a burden that must lie with Amphastar and Teva at all times, the Court now separately finds that clear and convincing evidence adduced at trial independently reestablishes—and substantially strengthens—those earlier inferences of intent.

(A.) *Clear And Convincing Evidence of Intent To Deceive.*

(1.) *The Elements Of Intent: Knowledge, Knowledge of Materiality, and No Credible Excuse.*

A finding of deceptive intent is legitimate under the Federal Circuit's recent opinion in *Ferring*, 437 F.3d at 1191, because Defendants presented clear and convincing evidence that "there has been a failure to supply highly material information and [] the record establishes that (1) the applicant knew of the information; (2) the applicant knew or should have known of the materiality of the information; and (3) the applicant has not provided a credible explanation for the withholding." See also *Bruno Indep. Living*, 394 F.3d at 1354; *Critikon, Inc.*, 120 F.3d at 1257. The elements of nondisclosure and high materiality have been admitted, and no credible excuse demonstrated. Regarding knowledge, there is

no debate that Dr. Uzan knew the doses used in the Duchier and Fouquet studies, and at trial, Dr. Uzan admitted to knowing that he was comparing the half-lives of the '618 and EP '144 LMWHs at different doses. Regarding knowledge of materiality, it was obvious that a reasonable PE would have considered dosage important. Depending on the dose tested, compositional difference was either possible to prove, or it was not; the difference in half-life either appeared significant, or it did not. Dosage was the fulcrum on which Aventis' entire case for patentability turned.

(2.) Dr. Uzan's Explanation: A Total Absence Of Indicia Of Credibility.

Here, the Court does not rely only on formal, mechanistic criteria to infer intent. Rather, the Court will step back and examine the overall credibility of Dr. Uzan's story on Dr. Uzan's terms—asking: Is it complete? Is it consistent? Is it corroborated? Is it plausible? Is it explanatory? The Court's finding of deceptive intent is entailed by the negative answers it is forced to give for each question on the facts presented. Dr. Uzan's explanation suffers from a total absence of indicia of credibility. Where excusing a knowing nondisclosure of material information depends on believing a justificatory explanation that is coherent only if a sequence of statements are each true, and the evidence does not justify belief in the truth of *any* of those statements, then belief in the truth of the explanation cannot be justified. The Court is presented with just such a case. Believing Dr. Uzan's explanation requires the Court to accept, at a minimum, that Dr. Uzan was concerned with clinical relevance; that he was focused on DVT; that 40 mg was the therapeutically

preferred dose; that Fouquet was the only known source of EP '144 data²⁰; that the half-lives of the '618 and EP '144 LMWHs were dose-independent; that Dr. Uzan did not know, nor should he have known, that the PE's primary argument against patentability was based on inherency; that he subjectively believed the '618 and EP '144 LMWHs to be compositionally distinct; that it was mere coincidence that Dr. Uzan's methodology specifically called for the only dose of the '618 LMWH reflecting a statistically significant difference in half-life; that Dr. Uzan's omission of the EP '144 dosage information in Example 6 was inadvertent; that his omission of the EP '144 dosage information in Table III of the Second Declaration was inadvertent; and that the total absence, prior to litigation, of any reference to the DVT indication, to any scarcity of sources of EP '144 data, or to the concepts of clinical relevance of dose, therapeutically preferred dose, or dose-independence of half-life was also coincidence. That not one of these propositions is credible individually renders Dr. Uzan's explanation not credible globally.

(B.) Conclusion.

Negligence played no role in Aventis and Dr. Uzan's failure to disclose the EP '144 dose information. This is evident from the magnitude of

²⁰ This is improbable considering that enoxaparin as claimed and disclosed by the EP '144 patent had been widely prescribed in Europe prior to the '618 prosecution and studied in human volunteers as early as 1983. It was also disclosed in the 1989 Annual Report that clinical trials were ongoing in the United States.

the coincidence necessary to explain, as purely accidental, the convergence of Dr. Uzan's mistakenly narrow focus on clinical relevance; with his mistakenly narrow focus on DVT in high-risk orthopedics; with the memory loss of the Aventis Patent Department regarding both; with the incorporation of the only dataset supportive of patentability, into a flawed experimental design calculated to answer a question not asked; with the repeated omission over time, by both Aventis and Dr. Uzan separately, of precisely those bits of information capable, if disclosed, of arousing the PE's suspicions as to the negligence; with the consequent issuance of an urgently needed patent on a commercially valuable drug which has been argued, though not yet proven, to be chemically indistinct from unpatentable prior art.

This is a case involving a statistical analysis designed post-hoc and rationalized in hindsight to fit a hoped-for result. Legally and practically, Dr. Uzan stands before the Court in the same position as he would if no evidence of subjective good faith had been offered. Therefore, based on the totality of the facts and circumstances surrounding Dr. Uzan's repeated omissions, the Court hereby finds the Defendants have shown by clear and convincing evidence that Dr. Uzan intended to deceive the PTO.

VII. DISPOSITION

At this point, the Court must determine "whether the material misrepresentations or omissions in question are sufficiently serious in the light of the evidence of intent to deceive, to warrant the severe sanction of holding the patent unenforceable." *Hoffmann—La Roche, Inc. v. Promega Corp.*, 323 F.3d 1354, 1372 (Fed. Cir.

2003). Balanced against the Federal Circuit's recognition of high materiality, the requisite showing of intent is proportionally less. See *Bristol—Myers Squibb Co. v. Rhone—Poulenc Rorer, Inc.*, 326 F.3d 1226, 1234 (Fed. Cir. 2003). The Court need not be detained by intricate questions of weight. But for Dr. Uzan's intentional omissions, the probability is high that the '618 patent would not have issued. The '618 patent must therefore be found to be unenforceable on the ground of inequitable conduct.

ACCORDINGLY, IT IS ORDERED:

(1.) United States Patent No. 5,389,618, and its replacement, United States Reissue Patent No. 38,743, are unenforceable by virtue of inequitable conduct before the U.S. PTO.

(2.) Defendant Amphastar Pharmaceuticals, Inc.'s MOTION TO STRIKE IMPROPER EXPERT OPINION TESTIMONY BY ANDRE UZAN is DENIED.

APPENDIX C

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

2007-1280

**AVENTIS PHARMA S.A. and AVENTIS
PHARMACEUTICALS, INC.,**

Plaintiffs-Appellants,

v.

AMPHASTAR PHARMACEUTICALS, INC.,

Defendant-Appellee,

and

TEVA PHARMACEUTICALS USA, INC.,

Defendant-Appellee.

Appeal from the United States District Court for the
Central District of California in case no. 03-CV-887,
Senior Judge Mariana R. Pfaelzer.

ORDER

NOTE: This order is nonprecedential

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

O R D E R

A combined petition for panel rehearing and for rehearing en banc having been filed by the Appellants,* and a response thereto having been invited by the court and filed by the Appellees, and the petition for rehearing and response, having been referred to the panel that heard the appeal, and thereafter the petition for rehearing en banc and response having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for panel rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the petition for rehearing en banc be, and the same hereby is, DENIED.

The mandate of the court will issue on October 2, 2008.

FOR THE COURT

/s/

* Amici Curiae, Pharmaceutical Research and Manufacturers of America; Group of Interested Patent Law Professors; 3M Company, et al.; Biotechnology Industry Organization; Johnson & Johnson; and Generic Pharmaceutical Association were granted leave to file briefs in support of the Appellants' combined petition for panel rehearing and for rehearing en banc.

94a

Jan Horbaly
Clerk

Dated: 09/25/2008

cc: Donald R. Dunner
Jan P. Weir, Frances C.
Lynch
Counsel for Amici Curiae

FILED
U.S. Court of Appeals
for
the Federal Circuit
SEP 25, 2008
JAN HORBALY
CLERK

AVENTIS PHARMA V AMPHASTAR PHARM,
2007-1280 (DCT-03-CV-887)

APPENDIX D

**UNITED STATES COURT OF APPEALS,
FEDERAL CIRCUIT**

**AVENTIS PHARMA S.A. and Aventis
Pharmaceuticals Inc., Plaintiffs-Appellants,**

v.

**AMPHASTAR PHARMACEUTICALS, INC.,
Defendant-Appellee,**

and

**Teva Pharmaceuticals USA, Inc.,
Defendant-Appellee.**

No. 05-1513.

April 10, 2006.

**Rehearing and Rehearing En Banc
Denied June 7, 2006.**

**Before RADER, SCHALL, and PROST, Circuit
Judges.**

PROST, Circuit Judge.

Aventis Pharma S.A. and Aventis Pharmaceuticals, Inc., (collectively, "Aventis") appeal from decisions of the United States District Court for the Central District of California granting summary judgment in favor of Amphastar Pharmaceuticals, Inc., ("Amphastar") and Teva Pharmaceuticals USA, Inc., ("Teva") (jointly "appellees") holding unenforceable United States Patent No. 5,389,618

(“the ‘618 patent”), *Aventis Pharma S.A. v. Amphastar Pharm.*, 390 F.Supp.2d 936 (C.D. Cal. 2005) (“*Aventis Opinion*”), and United States Reissue Patent No. 38,743 (“the ‘743 reissue patent”), *Aventis Pharma S.A. v. Amphastar Pharm.*, 390 F.Supp.2d 952 (C.D. Cal. 2005). Although there are no genuine issues of material fact with respect to materiality, because genuine issues of material fact remain as to intent, we *reverse* the district court’s grant of summary judgment of inequitable conduct and *remand* for further proceedings consistent with this opinion.

BACKGROUND

The ‘618 patent and the ‘743 reissue patent disclose and claim mixtures of low molecular weight herapin (“LMWH”) used to prevent blood clots. During prosecution of the application leading to the ‘618 patent and the ‘743 reissue patent, Aventis compared the half-life of a product allegedly covered by the ‘618 patent (Example 6 of the ‘618 patent or “Debie LMWH”) at a 40 mg dose to the half-life of a prior art product (“EP 40,144 LMWH” or “Mardiguan LMWH”) at a 60 mg dose. Aventis made these comparisons to the Patent and Trademark Office (“PTO”) in the patent application, in several office action responses, and in two declarations by a French scientist named Dr. Andre Uzan to show an unexpected and significantly better half-life of Debie LMWH when compared to EP 40,144 LMWH. Aventis did not, however, expressly disclose the dosages at which the half-life comparisons were made, and specifically, that the EP 40,144 LMWH data was for a 60 mg dose.

The ‘618 patent and the ‘743 reissue patent purportedly cover drug compositions called Lovenox®

that are approved by the Food and Drug Administration ("FDA"). Amphastar and Teva filed Abbreviated New Drug Applications ("ANDAs") with the FDA to obtain approval to market generic versions of Lovenox®. In response, Aventis, the owners of the '618 patent and the '743 reissue patent, filed a patent infringement suit against Amphastar and Teva in the United States District Court for the Central District of California.

The district court granted a motion for summary judgment of unenforceability due to inequitable conduct submitted by Amphastar. Without holding a hearing, the court concluded that Aventis's repeated representations of patentability based on the purported improved half-life of Debie LMWH were material. The court faulted Aventis for comparing data based on different doses to show an improved half-life, when a comparison of available data using the same doses actually showed that there was little if any difference between the half-lives of the prior art and the purported invention. The court rejected Aventis's argument that Dr. Uzan's first declaration can reasonably be interpreted as meaning that the disclosed half-life data was based on different dosages, calling the argument "specious."

Regarding intent, the court rejected Aventis's argument that the use of the 40 mg Debie LMWH data, as opposed to the 60 mg Debie LMWH data, was reasonable. The court stated that the question is not whether use of the 40 mg data was reasonable, but whether there was an omission of material fact, particularly in light of the fact that the same study showed that the 60 mg Debie LMWH data and the 60 mg EP 40,144 LMWH data was much closer than the 40 mg Debie LMWH data and the 60 mg EP

40,144 LMWH data. Based on these circumstances, the court found that the facts support a strong inference of intent. The court then weighed materiality and intent. It found weighty uncontroverted evidence sufficient to establish materiality and intent to deceive, and further stated that Aventis submitted just a scintilla of evidence in opposition. It therefore granted summary judgment of unenforceability due to inequitable conduct.¹ Aventis timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a) (1).

DISCUSSION

A. Standards of Review

We review a district court's grant of summary judgment under the law of the applicable regional circuit. *CollegeNet Inc. v. ApplyYourself Inc.*, 418 F.3d 1225, 1230 (Fed. Cir. 2005). In the Ninth

¹ Aventis filed the reissue application that led to the '743 reissue patent before filing suit against Amphastar and Teva. During prosecution of the reissue application, Aventis informed the examiner that it was not relying on any statement or argument based on Example 6 made during prosecution of the application leading to the '618 patent. The '743 reissue patent issued, and therefore Aventis surrendered the '618 patent by operation of law, the day before the district court granted Amphastar's summary judgment motion with respect to the '618 patent. After granting summary judgment on the '618 patent, the court applied the holding of *Hoffman-La Roche Inc. v. Lemmon Co.*, 906 F.2d 684, 688-89 (Fed. Cir. 1990) (inequitable conduct in original patent renders any reissue patent unenforceable), to enter summary judgment of unenforceability against the '743 reissue patent. *Aventis Pharma*, 390 F.Supp.2d at 954-55.

Circuit, a grant of summary judgment is reviewed de novo. *Leonel v. Am. Airlines, Inc.*, 400 F.3d 702, 708 (9th Cir. 2005). "We must determine 'whether, viewing the evidence in the light most favorable to the nonmoving party, there are any genuine issues of material fact and whether the district court correctly applied the relevant substantive law.'" *Id.* (quoting *Lopez v. Smith*, 203 F.3d 1122, 1131 (9th Cir. 2000) (en banc)).

This court recently stated the standards for finding inequitable conduct as follows:

Applicants for patents have a duty to prosecute patents in the PTO with candor and good faith, including a duty to disclose information known to the applicants to be material to patentability. A breach of this duty may constitute inequitable conduct, which can arise from an affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information, coupled with an intent to deceive or mislead the PTO. A party asserting that a patent is unenforceable due to inequitable conduct must prove materiality and intent by clear and convincing evidence. Once threshold findings of materiality and intent are established, the trial court must weigh them to determine whether the equities warrant a conclusion that inequitable conduct occurred. This requires a careful balancing: when the misrepresentation or withheld information is highly material, a lesser quantum of proof is needed to establish the requisite intent. In

contrast, the less material the information, the greater the proof must be.

Purdue Pharma L.P. v. Endo Pharm., Inc., 438 F.3d 1123, 1128-29 (Fed. Cir. 2006) (citations omitted).

B. Materiality

We first consider whether there is any issue of material fact that the applicant for the '618 patent failed to disclose material facts to the PTO. The threshold showing of materiality required to proceed to the "balancing" portion of the inequitable conduct inquiry can be met by showing a reasonable examiner would have considered such information important in deciding whether to allow the application. *Digital Control, Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1316 (Fed. Cir. 2006).

The district court first determined that "Amphastar, by clear and convincing evidence, has met its initial burden of identifying for the court those portions of the materials on file that it believes demonstrates the absence of any genuine issue of material fact with respect to Aventis's failure to disclose material information." *Aventis Opinion*, 390 F.Supp.2d at 946. We agree that based on Aventis's undisputed omissions, Amphastar met its initial burden of showing that Aventis failed to disclose material information. Aventis never disclosed during prosecution that it derived the half-life data for the EP 40,144 LMWH at a 60 mg dose. The half-life comparisons were highly material to patentability. In multiple office actions, the examiner rejected claims for the Debride compounds based on the EP 40,144 patent. Each time, Aventis distinguished the Debride compounds based on their "significant" increase in half-life over the EP 40,144 compounds without providing any information

regarding the dosage at which the data for either compound was obtained. In its final office action, Aventis provided three tables of test data: 1) Debie LMWHs labeled as obtained at 40 mg; 2) Debie LMWH labeled as obtained at 60 mg; and 3) EP 40,144 LMWH without a label as to its dosage. The failure to disclose that the EP 40,144 data was obtained at 60 mg denied the examiner an opportunity to determine whether the differences in half-lives between the Debie and EP 40,144 compounds were significant. Therefore, an omission that would have revealed that the difference in half-lives was actually much smaller was material to patentability. A comparison made at the same dosage, 60 mg, would have yielded a much smaller difference in half-life. Given the centrality of the differences in half-lives to patentability, by failing to disclose the dosage of the 60 mg compound or to disclose that the difference in half-lives at the same dosage was actually lower, Aventis failed to disclose material information to the PTO.

The district court then found that Aventis failed to establish any facts showing a genuine issue of material fact that a material omission was made in prosecution of the '618 patent. *Id.* at 946.

On appeal, Aventis argues that it has raised material facts regarding materiality of the omission. Aventis contends that if the dose information was material, the examiner would have requested it because 1) she was presented with half-life data that enabled her to compare various doses, and 2) she had a motivation to compare them. Aventis argues that the examiner would have been so motivated because Dr. Uzan did inform the examiner that the dosage comparison was done at different dosages, Dr. Uzan

never expressly represented that he was comparing half-life at the same dose, those of skill in the art frequently compared half-lives at different doses and so the examiner should have assumed this here, and because the specification teaches that the half-life of the claimed products are independent of dose. We reject these arguments.

In support of its argument that Dr. Uzan did inform the examiner that the dosage comparison was done at different dosages, Aventis points to language in Dr. Uzan's March 29, 1993 declaration, stating:

the claimed formulations had a plasma half life longer than 4 1/2 hours in 45% of the cases in contrast to Mardiguan [sic] who achieved such a half life in only 17% of the cases. This represents an increase in 250% in the half life and is very significant because *it enables the same effect to be achieved with lower dosages.*

(J.A. 1894) (emphasis added). Dr. Uzan explained at his deposition that he believes that the second sentence "say[s] that the comparison is a comparison between two doses of which one is lower than the other." (J.A. 2119-20.) Aventis's rebuttal expert claimed the statement "reasonably conveys that at a lower dose of the [Debrie] product, a higher percentage of subjects exhibited a half-life longer than 4 1/2 hours." (J.A. 1010.) Aventis maintains that the court erred in dismissing this interpretation of the sentence as "specious," and argues that, at a minimum, the testimony is subject to reasonable debate.

Although Dr. Uzan may have had some doubt as to the meaning of his statement, we find there is no reasonable debate as to what it stated to the patent

office. A reasonable examiner would understand the statement only to allege a benefit of the claimed invention, not as a disclosure that different dosages were being compared. Aventis's own statements incorporating Dr. Uzan's declaration support this conclusion. For example, in one office action, Aventis stated:

[T]he half life obtained for the claimed preparation was 4.36 +1.07 hours whereas that for Mardiguian was 3.33 +0.2 hours. This is approximately a 30% difference in results and is significant in that it means that *the claimed preparations can be administered in significantly lower doses.*

(J.A. 1933) (emphasis added); (see also J.A. 1885-86 (referencing Dr. Uzan's statement)). It is not plausible to read these statements as indicating to the examiner that the data for the Debie LMWH was obtained for a lower dose than the Mardiguian LMWH. They tell the examiner that the longer half-life of the claimed invention is a benefit. We therefore agree with the district court that there is no genuine issue of material fact that Dr. Uzan did not disclose in this statement that the comparison was made using data from different doses.²

Second, although Aventis did not expressly represent that the half-life comparison was at the same dosage, it repeatedly compared the 40 mg

² If, as Aventis argues, Dr. Uzan did actually believe he was disclosing a comparison of different doses, in part because he is a native French speaker, this may go to his intent, as discussed further below.

Debie LMWH table's data with the unlabelled EP 40,144 data. By making the comparison at different dosages without disclosing that this was so, Aventis led the examiner away from any questions about dosage or any motivation to question the dosage for the EP 40,144 data.

In addition, we reject Aventis's argument that the examiner would be motivated to compare half-lives at different dosages, as this was common practice. In each of the prior art references Aventis cites as showing comparisons at different dosages, the differences in dosages was expressly disclosed. In addition, although a comparison of preferred therapeutic doses may be the norm, there is no evidence that the examiner was ever made aware that the preferred therapeutic dose for the Debie compound was 40 mg. Therefore, though it may at times be reasonable to compare half-lives for different dosages would not have motivated the examiner to compare the unlabelled 60 mg EP 40,144 data with the 60 mg Debie data, when the comparison provided used the 40 mg Debie data.

Finally, we reject Aventis's position that the examiner would be motivated to compare different dosages because the specification stated that the claimed compounds were dose independent. Indeed, if the examiner truly credited the fact that the Debie LMWHs are dose independent, the examiner would have had no reason to compare the EP 40,144 data with different doses of the Debie data because the Debie data at different doses would be the same. In addition, the examiner could not have been aware of whether the EP 40,144 data was for a particular dose or for some combination of dosages, such that a comparison would be irrelevant.

In summary, it was insufficient to merely submit the underlying data to the examiner and later argue that the examiner could have requested the EP 40,144 dosage information to make additional comparisons. The withholding of the EP 40,144 dosage information prevented the examiner from considering information important in deciding whether to allow the application, and was therefore a failure to disclose material information to the PTO. *Digital Control*, 437 F.3d at 1314.

C. Intent to Deceive the PTO

Even if an omission is found to be material, the omission must also be found to have been made with the intent to deceive. "Materiality does not presume intent, which is a separate and essential component of inequitable conduct." *GFI, Inc. v. Franklin, Corp.*, 265 F.3d 1268, 1274 (Fed. Cir. 2001) (quoting *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 552 (Fed. Cir. 1990)). To find an intent to deceive, "the involved conduct, viewed in light of all the evidence, including evidence of good faith, must indicate sufficient culpability to require a finding of intent to deceive." *Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.*, 984 F.2d 1182, 1189 (Fed. Cir. 1993) (quoting *Kingsdown Med. Consultants Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) (en banc)). "Intent need not be shown by direct evidence, but may be inferred from the totality of the evidence." *Digital Control*, 437 F.3d at 1319. However, "[i]n the summary judgment context, all inferences must be made in favor of the nonmovant; thus, it is often improper to determine at summary judgment that a patentee made intentional misstatements or omissions to the PTO." *Id.* at 1317. On summary judgment, to create a genuine issue of

material fact, Aventis was required to state specific facts supporting a plausible justification or excuse for its failure to disclose material information. *Paragon Podiatry*, 984 F.2d at 1191.

Here, the district court did not find direct evidence of intent to deceive, but found that the "facts and circumstances surrounding the failure to disclose the dose differential ... supports a strong inference of intent by Aventis to deceive the PTO." *Aventis Opinion*, 390 F.Supp.2d at 951-52. Aventis contends that the district court erred in finding an intent to deceive on summary judgment by denying Dr. Uzan an opportunity to testify in person, ignoring evidence negating intent, misconstruing deposition testimony, and drawing factual inferences adverse to Aventis. Because Aventis has met its burden of setting forth a plausible justification for its failure to disclose material information, deciding all inferences in favor of Aventis, we hold that the district court erred in finding intent to deceive on summary judgment.

For example, the district court found it irrelevant whether comparison at different doses was reasonable. *Id.* at 951. On appeal, Teva also advocates this position, arguing that the relevant inquiry is whether there was an intent to deceive in failing to disclose the 60 mg dosage amount of the prior art product. We disagree. The reasonableness of the comparison between different dosages *is* relevant to determining whether the failure to disclose that the comparison was made using 60 mg EP 40,144 data was made with an intent to deceive.

Because there exist genuine issues of material fact as to the reasonableness of the comparisons made by Aventis,³ we must draw an inference for purposes of summary judgment that it was reasonable to compare the 40 mg Debie half-life with the 60 mg EP 40,144 half-life. Accepting that inference, the district court was required to determine whether Aventis still intended to deceive by withholding the dosages at which the comparisons were made.

Aventis maintains that Dr. Uzan had a reasonable belief that he informed the examiner that his half-life comparison was made at different doses and that he could not have intended to deceive because he disclosed the data based on 60 mg. Aventis further explains that Dr. Uzan had no reason to make a prospective statement about what would be possible using a lower dose based on a comparison at the same dose, because he could and did directly make that point by comparing the 60 mg EP 40,144 LMWH data against the 40 mg Debie LMWH data. Aventis also points out that the district court did not even reference, let alone draw reasonable inferences from the fact that Dr. Uzan submitted the half-life data for 60 mg of Debie LMWH, which would allow the examiner to compare the data from equal doses.

³ For example, Aventis argues the comparison was reasonable because: 1) it reflects the preferred dosage level for therapeutic reasons; 2) the 60 mg dosage level was not preferred because it caused bleeding in some patients; and 3) the 40 mg dosage level was more reliable because it had been confirmed in a separate study.

Although the district court did not reference all of Aventis's arguments, it ultimately concluded that the facts supported a strong inference of intent to deceive. The district court's inference was reasonable by failing to disclose that the EP 40,144 data was at a 60 mg dose, Aventis may have been painting the rosiest picture possible as to the half-life improvement of its claimed compounds in an attempt to deceive the examiner.⁴ Appellees contend that this is only reasonable inference to draw from the facts presented.

However, there is another reasonable inference—namely, as Aventis argues, if the comparison between different doses was reasonable, the failure to disclose may have been due purely to inadvertence. Based on the facts presented by Aventis, these are not “insupportable, [or] specious ... explanations or excuses.” *Paragon Podiatry*, 984 F.2d at 1190. Neither are Aventis's contentions merely “[c]onclusory allegations and attorney arguments.” *Ferring v. Barr*, 437 F.3d 1181, 1193 (Fed. Cir. 2006). Aventis presents declarations from the inventor, the declarant, and an expert witness stating facts supporting a “plausible justification” for its material omission. *Paragon Podiatry*, 984 F.2d at 1191. Therefore, a finding of intent was inappropriate on summary judgment.

⁴ Even the disclosure of the 60 mg Debie data might ultimately militate a finding of intent to deceive because it implies that Dr. Uzan was aware that the 60 mg data was relevant to the comparison, but did not specifically tell the examiner why.

CONCLUSION

While we agree with the district court with regard to its finding of materiality on summary judgment, there remain genuine issues of material fact regarding Aventis's intent to deceive the PTO. Therefore, we reverse the district court's decisions granting summary judgment of unenforceability of the '618 patent and '743 reissue patent and remand for further proceedings consistent with this opinion.

APPENDIX E

United States District Court, C.D. California,
Eastern Division.

**AVENTIS PHARMA S.A. and Aventis
Pharmaceuticals Inc., Plaintiffs,**

v.

**AMPHASTAR PHARMACEUTICALS, INC. and
Teva Pharmaceuticals USA, Inc., Defendants.
No. EDCV03-887 RT(SGLX), EDCV04-333RT
(SGLX).**

June 15, 2005.

TIMLIN, District Judge.

The court, Judge Robert J. Timlin, has read and considered defendant Amphastar Pharmaceuticals, Inc. ("Amphastar")'s motion for summary judgment for inequitable conduct pursuant to Federal Rules of Civil Procedure, Rule 56 ("Rule 56"), plaintiffs Aventis Pharma S.A. and Aventis Pharmaceuticals Inc. (collectively, "Aventis") opposition, and Amphastar's reply. Based on such consideration, the court concludes as follows:

I.

BACKGROUND

Aventis is a pharmaceutical company that manufactures Lovenox. Lovenox is a blood thinner that inhibits the formation of certain venous blood clots called thromboses. Lovenox is derived from

heparin. Heparin is a mixture of long polysaccharide molecules obtained from the internal organs of animals such as pigs and cattle. Through a chemical process, heparin's longer molecules can be broken down into shorter molecules. A group of these shorter molecules are called low molecular weight heparins ("LMWHs"). U.S. Patent No. 5,389,618 ("the '618 patent") covers a range of defined LMWHs, including Lovenox, and their administration to patients who are susceptible to blood clots.

Aventis filed an action in this court against Amphastar and Teva Pharmaceuticals USA, Inc. ("Teva") (collectively, "Defendants") for infringement of the '618 patent. Defendants dispute infringement and claim that the '618 patent is invalid and unenforceable. One of Amphastar's grounds for unenforceability is the affirmative defense and counterclaim of inequitable conduct by Aventis.

Amphastar now moves the court for summary judgment on its affirmative defense and counterclaim that the '618 patent is unenforceable due to Aventis' inequitable conduct.

II.

UNCONTROVERTED MATERIAL FACTS

The following are uncontroverted material facts supported by admissible evidence:

On May 8, 1981, Aventis filed European Patent Application No. 81/400728.2 ("European Patent Application") based upon French Patent Application No. 80/10791 ("French '791 application"). The European

Patent Application was subsequently published on November 18, 1981 as European Patent 40,144.¹

On June 26, 1990, Aventis filed French Patent Application No. 90/8013 ("French '013 application"), the priority application of the '618 patent. The French '013 application lists the sole inventor as Roger Debie ("Debie").

In early 1991, Aventis had begun the process of obtaining drug approval for "Lovenox" in the United States. Aventis had no patent protection for Lovenox in the United States at that time.

In a January 1991 internal memorandum, Aventis acknowledges the lack of and need for patent protection in the United States and notes an April 1991 target deadline for filing its New Drug Application ("NDA").

On June 17, 1991, a month before filing its NDA, in another Aventis' internal memorandum discussing Mardiguian 40,144, Aventis states: "Enoxaparin is not expressly described in this application but is comprised in the claims." The memorandum then notes that the Mardiguian 40,144 patent was revoked and goes on to state, "A patent application concerning the molecular distribution of enoxaparin has been filed on June 26, 1990 in France and must be filed in different countries before June 26, 1991."

¹ This order will refer to European Patent 40,144 as "Mardiguian 40,144." Mardiguian was the inventor of European Patent 40,144.

On June 26, 1991, Aventis filed United States Patent Application Serial No. 721,315 ("the '315 application") to the United States Patent and Trademark Office ("PTO"), claiming a priority date of June 26, 1990 based upon the French '013 application. Undisputed footnote 5: On July 16, 1993, Aventis filed a continuation of the '315 application, United States application No. 92,577, which ultimately issued as the '618 patent, the patent in suit.²

In July 1991, shortly after filing the patent application, Aventis filed its NDA for Lovenox.

In its 1991 NDA submissions, Aventis claimed that the '315 application covered Lovenox.

In 1992, Aventis represented to the PTO that the invention claimed in the '315 application was patentably distinct from Mardiguian 40,144 (which was the same as the French '611 patent).

Aventis distinguished the compositions of Mardiguian 40,144 in the '618 patent's written description.

The '315 application was filed with 28 original claims with original Claim 1 being the only independent claim.

In an Office Action dated April 2, 1992, the PTO rejected all the original claims for various reasons and in particular rejected Claims 1-7 and 24-28 for being anticipated or obvious over several references, including Mardiguian 40,144.

² The '315 application issued as the '618 patent.

On August 3, 1992, Aventis responded to the Office Action by arguing that the prior art did not render the claims unpatentable.

On October 16, 1992, the PTO issued another Office Action rejecting all the pending claims including rejecting Claims 1-7, 24-28, and 29-31 as both anticipated and obvious in view of the prior art including Mardiguian 40,144.

On April 16, 1993, Aventis filed an "Amendment After Final Rejection" responding to the PTO's rejections. In its response, Aventis refers to arguments that were discussed during the interview with the PTO examiner on March 2, 1993.

In support of its April 1993 arguments, Aventis submitted an expert declaration of its employee, Dr. Andre Uzan ("Dr. Uzan") ("First Uzan Declaration"), which specifically addressed the Examiner's statement that the half-life data reported in Example 6 of the '315 application was not significant.

The First Uzan Declaration also includes an analysis of a purported reproduction of Example 8 of Mardiguian 40,144 finding 21% of molecules below 200 daltons, 6% greater than 8,000, and 73% between 2,000 and 8,000, which the declaration states "is clearly outside the scope of the present invention."

On July 16, 1993, Aventis filed a continuation application, which ultimately issued into the '618 patent.

On September 9, 1993, Aventis filed a Preliminary Amendment which amended the claims and responded to the Examiner's May 13, 1993 Advisory Action.

On November 20, 1993, the PTO issued another Office Action once again rejecting the pending claims over Mardiguian 40,144.

On May 16, 1994, Aventis filed another Amendment responding to the Examiner's objections.

After another interview with the Examiner on May 17, 1994, Aventis filed a Supplemental Response dated June 17, 1994 and another Declaration from Dr. Uzan ("Second Uzan Declaration"). This Second Uzan Declaration presented five tables: "Tables, I, X and XI which refer to the compound of the invention and Tables A and III which refer to the compound of Mardiguian."

The Second Uzan Declaration goes on to compare the half-life data in Table X (4.36 hours \pm 1.07) with the data in Table III (3.33 hours \pm .69), and asserts that the difference is statistically significant.

A 1984 Aventis study by Aiach and Fourtillan ("Aiach/Fourtillan Study") is the source of the data in paragraph (3) of Example 6 of the '618 patent (as well as Table III attached to the Second Uzan Declaration filed during the prosecution of the '618 patent).

Aventis acknowledged that paragraph (3) of Example 6 in the '618 patent was "a product prepared according to the process described in European Patent EP 40,144."

In November/December 1985, in connection with Aventis' application for marketing approval in Europe, Aventis prepared a dose-ranging study on

PK 10169³ by, among others, Frydman/Duchier ("Frydman/Duchier Study"). The Frydman/Duchier dose-ranging study shows a half-life of 4.36 hours \pm 1.07 for 40 mg dose and 3.70 \pm 0.82 for 60 mg dose.

The Frydman/Duchier study is described in Example 6 of the '618 patent, and is the source of the data in paragraph (1) of Example 6 and Tables X and XI in the Second Uzan Declaration. The results of the 1986 Frydman/Duchier Study were published in 1988: Frydman, et al., The Antithrombotic Activity and Pharmacokinetics of Enoxaparine ..., 28 *Journal of Clinical Pharmacology* 609-618 (1988).

The information in the '315 application and the '618 patent regarding the biological properties of the claimed invention and those of prior compounds was provided by Dr. Uzan.

Dr. Uzan testified at his deposition that he recalled the following four sources of the data regarding the biological properties of the claimed invention and those of the prior art compounds: (1) the 1984 Aiach/Fourtillan Study; (2) the 1986 Dawes publication; (3) the 1986 Frydman/Duchier Study (results published in 1988); and (4) a later study referred to in paragraph 4 of Example 6, perhaps attributable to Guibert.

³ PK 10169 is a specific LMWH. It is also known as enoxaparin.

III.**ANALYSIS****A. Legal Standard Governing Motion For Summary Judgment**

Under Federal Rules of Civil Procedure, Rule 56(c) ("Rule 56(c)"), a district court may grant summary judgment where "the pleadings, depositions, answers to interrogatories, and admissions on file, together with affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law."

The Supreme Court and the Ninth Circuit have established the following standards for consideration of such motions: "If the party moving for summary judgment meets its initial burden of identifying for the court those portions of the materials on file that it believes demonstrates the absence of any genuine issue of material fact," the burden of production then shifts so that "the nonmoving party must set forth, by affidavit or as otherwise provided in Rule 56, 'specific facts showing that there is a genuine issue for trial.'" *T.W. Elec. Serv., Inc. v. Pacific Elec. Contractors Ass'n*, 809 F.2d 626, 630 (9th Cir. 1987) (citations omitted). With respect to these specific facts offered by the non-moving party, the court does not make credibility determinations or weigh conflicting evidence, and is required to draw all inferences in a light most favorable to the non-moving party. *See id.* at 630-31 (citations omitted).

Rule 56(c) nevertheless requires this court to enter summary judgment, "after adequate time for discovery and upon motion, against a party who fails to make a showing sufficient to establish the

existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial." *Celotex Corp. v. Catrett*, 477 U.S. 317, 322, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). The mere existence of a scintilla of evidence in support of the non-moving party's position is insufficient: "[T]here must be evidence on which the jury could reasonably find for the [non-moving party]." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). This court thus applies to either party's motion for summary judgment the same standard as that for a motion for a directed verdict: "[W]hether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law." *T.W. Elec. Serv.*, 809 F.2d at 630.

B. Amphastar's Motion

1. Legal Standard for Inequitable Conduct

Amphastar contends the undisputed facts, even with all reasonable inferences in Aventis' favor, establish that Dr. Uzan engaged in inequitable conduct to obtain the '618 patent. Generally, patent applicants owe a "duty of candor and good faith" to the PTO. 37 C.F.R. § 1.56(a); *see also Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995). "A breach of this duty constitutes inequitable conduct." *Id.* Inequitable conduct can render a patent unenforceable. *See Ulead Sys., Inc. v. Lex Computer & Mgmt. Corp.*, 351 F.3d 1139, 1144 (Fed. Cir. 2003).

To render a patent unenforceable, the party asserting inequitable conduct must show (1) affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information; and (2) an

intent to deceive the PTO. See *Molins PLC*, 48 F.3d at 1178 (citing *J.P. Stevens & Co. v. Lex Tex, Ltd.*, 747 F.2d 1553, 1559 (Fed. Cir. 1984), *cert. denied*, 474 U.S. 822, 106 S.Ct. 73, 88 L.Ed.2d 60 (1985)); *Cross Med. Prods. v. Medtronic Sofamor Danek, Inc.*, 2005 U.S. Dist. LEXIS 6545, at *36 (C.D. Cal. 2005). Materiality and intent must be established by clear and convincing evidence. *Ulead Sys., Inc.*, 351 F.3d at 1144. The court then weighs materiality and intent "to determine if equity warrants a finding of inequitable conduct." *Id.*

Inequitable conduct is an equitable doctrine and therefore is not an issue for a jury to decide. *PerSeptive Biosystems, Inc., v. Pharmacia Biotech, Inc.*, 225 F.3d 1315, 1318 (Fed. Cir. 2000). "Although the premises of inequitable conduct require findings based on all the evidence, a procedure that may preclude summary determination, a motion for summary judgment may be granted when, drawing all reasonable factual inferences in favor of the non-movant, the evidence is such that the non-movant can not [sic] prevail." *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 547 (Fed. Cir. 1998).

The issue before the court is whether certain factual representations on behalf of Aventis by Dr. Uzan to the PTO or nondisclosures by him to the PTO concerning the purported improved half-life of the '618 patent over the half-life of Mardiguian 40,144 constitute inequitable conduct.⁴

⁴ Half-life is the time over which the concentration of a drug falls to half of its original concentration in the blood.

2. Relevant Prosecution History of the '618 Patent

The Background of the Invention section of the '618 patent states: "The processes described in the prior art, and especially in EP 40,144, do not permit the production of mixtures possessing the requisite pharmacological properties for improved therapeutic applications, namely, a sufficiently long plasma half-life, a fairly high absorption rate, a high bioavailability or alternatively, a low clearance." It also states that "the mixtures of the ['618 patent] exhibit a half-life longer than other known preparations." (emphasis added).

Aventis supported the half-life assertion with Example 6 of the '618 patent ("Example 6"). Example 6 states:

This example illustrates the increase in stability, in vivo, of the mixtures of the invention, expressed by their plasma half-life.

A first pharmacokinetic study was carried out on volunteers between 21 and 30 years of age. Subcutaneous injections of doses ranging from 20 to 80 mg/ml were performed. At intervals of time, samples were drawn (4.5 ml) and stored at approximately 4[deg] C. The samples were then centrifuged for 15 minutes at 2,300 g and the platelet-poor plasma was separated and frozen prior to analysis. The half-life of the mixtures was then determined by measuring the anti-Xa activity. The results obtained were as follows:

(1) From the mixtures produced in Examples 3 and 4:⁵ 40 mg dose: in 75% of the cases, the half-life was longer than 4 hours, and was even longer than 4 1/2 hours in approximately 45% of the cases; 60 mg dose: in 75% of the cases, the half-life was longer than 3.7 hours.

(2) Under identical dosage conditions, intact heparin injected intravenously possessed a half-life of approximately 0.6 hours.

(3) When the product was prepared according to the process described in European Patent EP 40,144, the half-life was longer than 4 1/2 hours in 17% of the cases.

(4) A second study carried out under similar conditions on 20 patients provided the following results for the mixtures according to the present invention: 40 mg dose: in 80% of cases, the half-life was longer than 4 hours, and it was longer than 4 1/2 hours in approximately 40% of the cases; 20 mg dose: in 60% of the cases, the half-life was longer than 3.9 hours.

A significant portion of the '618 patent's prosecution history focused on Example 6 and its subject: half-life. In an Office Action dated April 2, 1992, the PTO rejected all claims of the '618 patent. The Examiner stated that Aventis must "provide[] some unexpected or unobvious property not demonstrated

⁵ Examples 3 and 4 illustrate the preparation, properties, and certain structural characteristics of the '618 patent.

by the prior art products." In response, on August 3, 1992, Aventis referred the Examiner to Example 6 and stated, "[i]n this regard, the Examiner is referred to Example 6 of the originally filed application wherein the product was prepared in accordance with the European patent and found to have a half-life significantly shorter than was observed with the formulation of the present invention ... Here, therefore, it should be apparent that formulations as claimed, having significantly improved half-lives as compared to the formulations of the European patent, are necessarily different from those of the European patent."

The Examiner rejected Aventis' response. He wrote, "[a]pplicant's arguments filed August 3, 1992 ... are not deemed to be persuasive Applicants assertions regarding the comparative data in the specification (comparison to EP 40144-Mardiguian) are not convincing ... since the half-life for [the Mardiguian patent] appears to be essentially the same as that for the instant mixtures."

On April 16, 1993, Aventis again responded to the Examiner's rejection. Aventis reiterated its position that the '618 patent was patentable over Mardiguian 40,144. Aventis wrote, "[i]n particular, Example 6 clearly demonstrates that the claimed compounds exhibit improved pharmacokinetic properties and, in particular, the products of the invention were found to have a plasma half-life longer than 4-1/2 hours in 40-45% of the cases where such half-life was observed in accordance with Mardiguian in only 17% of the cases. This represents an increase in 250% in half-life."

In support of the April 16, 1993 response, Aventis submitted the First Uzan Declaration. In

addition to reiterating the purported increase in half-life, Dr. Uzan stated, "[t]his represents an increase in 250% in half-life and is very significant because it enables the same effect to be achieved with lower dosages."

On July 16, 1993, Aventis filed a continuation application that ultimately issued as the '618 patent. In the application, Aventis responded to the Examiner's May 19, 1993 Advisory Action. Among other things, Aventis represented, "the data to which applicant presented in the Declaration Pursuant to 37 C.F.R. § 1.132 have a high degree of accuracy."

On November 20, 1993, the Examiner responded. He stated that Aventis "has failed to provide evidence that the alleged difference between the half-life of the Mardiguian product and that of the instant mixture is statistically significant." On May 16, 1994, Aventis responded:

"The results also demonstrate that different half lives were obtained for the claimed preparation versus the closest preparation for Mardiguian. In particular, the half-life obtained for the claimed preparation was 4.36 +/-1.07 hours whereas that for Mardiguian was 3.33 +/-0.2 hours. This is approximately a 30% difference in results and is significant in that it means that the claimed preparations can be administered at significantly lower doses."

On May 17, 1994, after another interview with the Examiner, Aventis filed a Supplemental Response and the Second Uzan Declaration. The Second Uzan Declaration presented five tables: Tables, I, X, and

XI which refer to the '618 patent and Tables A and III which refer to Mardiguian EP 40,144.

Table III "refer[s] to the compound of Mardiguian." Without mentioning dose amount, Table III reflects a mean half-life of 3.33 hours with a standard deviation of 0.82. Table X "refer[s] to the compound of the ['618 patent]." At a dose of 40 mg, it reflects a mean half-life of 4.36 hours with a standard deviation of 1.07. Table XI also "refer[s] to the compound of the ['618 patent]." At a dose of 60 mg, it reflects a mean half-life of 3.70 hours with a standard deviation of 0.82.

3. Amphastar's Contentions

Amphastar contends that Dr. Uzan's representations constituted a failure to disclose material information and an affirmative misrepresentation of a material fact. They constituted a failure to disclose material information because the unspecified dose amount in Table III was actually 60 mg and Dr. Uzan repeatedly⁶ compared it to a disclosed 40 mg dose of the '618 patent. Comparing the 60 mg dose amount of Mardiguian 40,144 and the 60 mg dose amount of the '618 patent results in a much closer mean half-life.⁷ It constituted an affirmative misrepresentation

⁶ The comparisons of the 40 mg dose of the '618 patent to the 40 mg dose of Mardiguian 40,144 were represented in paragraph (3) of Example 6, the May 17, 1994 Supplemental Response, the First Uzan Declaration, and the Second Uzan Declaration.

⁷ This closer mean half-life is evident by comparing Table III with Table XI. Table III reported the half-life for Mardiguian EP 40,144 at a 60 mg dose as 3.33 hours with

of a material fact because Dr. Uzan's declarations affirmatively stated that the half-life of the '618 patent was improved over Mardiguian EP 40,144 while the data before him did not support such a conclusion.

Amphastar also contends Dr. Uzan should have disclosed to the Examiner additional evidence known to Dr. Uzan. This evidence establishes that had Dr. Uzan compared the same dose amounts, the '618 patent would not have been an improvement over Mardiguian EP 40,144 as to half-life. This evidence consists of the following studies.

The first study is a 1984 comparative study of the bioavailability of two salts of enoxaparin by M. Aiach and J.B. Fourtillian ("Aiach/Fourtillian Study").⁸ The Aiach/Fourtillian Study included tests on PK 10169. This study is important because it formed the basis of Aventis' May 16, 1994 Amendment responding to the Examiner's objections and the Second Uzan Declaration. Among other things, the Aiach/Fourtillian Study contains the data that formed the basis of Table III, which reported the half-life for Mardiguian 40,144 as 3.33 hours with a standard deviation of 0.2. The Aiach/Fourtillian Study was conducted at a 60 mg dose. This dose was

[Footnote continued from previous page]

a standard deviation of 0.2. Table XI reported the half-life for the '618 patent at a 60 mg dose as 3.70 hours with a standard deviation of 0.82.

⁸ This study is different from Aiach, et al., A New Molecular Weight Heparin Derivative, 31 *Thrombosis Research* 611621 (1983).

not apparent from Table III, which was submitted with the Second Uzan Declaration.

The second study is Bara, et al., Comparative Pharmacokinetics of a Low Molecular Weight Heparin (PK 10169) ..., 39 *Thrombosis Research* 63136 (1985) ("Bara Study"). The Bara Study also conducted tests on PK 10169. Among other things, the Bara Study reported the mean half-life of a 40 mg dose of PK 10169 was 4.6 hours.⁹ Dr. Uzan did not cite the Bara Study to the PTO during the prosecution of the '618 patent.

Bara also coauthored a related study with J. Dawes entitled Relationship Between Biological Activity and Concentration of a Low-Molecular-Weight Heparin (PK 10169) and Unfractionated Heparin after Intravenous and Subcutaneous Administration, 15 *Haemostasis* 116-122 (1986) ("Dawes Study"). Like the Bara Study, Dr. Uzan did not cite the Dawes Study to the PTO during the prosecution of the '618 patent. Among other things, the Dawes Study reported the half-life of a 40 mg dose of PK 10169 was 4.6 hours.¹⁰

The fourth study is a 1986 comparative study of the linear resorption of 4 doses of enoxaparin (20, 40, 60, and 80 mg) given as a single sub-cutaneous injection to twelve healthy individuals by J. Duchier and A. Frydman ("Duchier/Frydman Study"). The Duchier/Frydman Study compared different doses of the admixture which later became the '618 patent.

⁹ This was reported in the study as 275 minutes.

¹⁰ This was reported in the study as 275 minutes.

Among other things, the Duchier/Frydman Study showed a mean half-life of 4.36 hours \pm 1.07 for a 40 mg dose and 3.70 hours \pm .82 for a 60 mg dose. The 40 mg dose data was eventually included in Aventis' May 16, 1994 Amendment responding to the Examiner's objections and in the Second Uzan Declaration.

4. Elements of Inequitable Conduct

a. Affirmative Misrepresentation of a Material Fact, Failure to Disclose Material Information, or Submission of False Material Information

Inequitable conduct requires affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information. *Molins PLC*, 48 F.3d at 1178. 37 C.F.R. § 1.56 ("Section 1.56") defines factual materiality for which the PTO has promulgated the duty of disclosure. *Bruno Indep. Living Aids v. Acorn Mobility Servs.*, 394 F.3d 1348, 1352 (Fed. Cir. 2005) (citing *Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1257 (Fed. Cir. 1997)). As defined in the current version of the rule,¹¹ information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and:

¹¹ According to the PTO's notice of final rulemaking, the rule change applied to all applications pending or filed after March 16, 1992. Duty of Disclosure, 57 Fed. Reg. 2021 (Jan. 17, 1992). The '618 patent issued February 14, 1995. Therefore, the new rule was applicable during the prosecution of the '618 patent and the court evaluates the materiality under the standard set forth in the new rule.

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

As discussed more fully above, through three Office Actions, the PTO rejected Aventis' claims because they were anticipated and obvious in view of Mardiguian EP 40,144. To overcome this bar to patentability, Aventis repeatedly opposed the "argument of unpatentability relied on by the Office" and asserted an "argument of patentability" based on the purported improved half-life of the '618 patent over Mardiguian EP 40,144. These repeated representations satisfy materiality as defined in Section 1.56.

Aventis did not disclose that it derived the half-life data reported in paragraph (3) of Example 6, the May 17, 1994 Supplemental Response, the First Uzan Declaration, and the Second Uzan Declaration from a comparison of the Mardiguian LMWH at a different dose than the claimed LMWH. Moreover, Aventis did not disclose that a comparison of the same dosages did not yield significantly different half-lives. The Aiach/Fourtillian Study and the Duchier/Frydman Study show that Example 6 of the '618 patent was comparing 60 mg dose data of Mardiguian EP 40,144 to 40 mg dose data of the '618 patent. When Dr. Uzan submitted his two declarations affirmatively representing that there

was a "significant" difference in the half-life between Mardiguian EP 40,144 and the '618 patent, he was comparing a 60 mg dose of Mardiguian EP 40,144 to a 40 mg dose of the '618 patent. A comparison of Aiach/Fourtillian Study and the Duchier/Frydman Study indicates that a 60 mg dose of the '618 patent had a half-life of 3.70 hours \pm .82 and a 60 mg dose of Mardiguian EP 40,144 had a half-life of 3.33 hours \pm .69. Thus, Aventis compared different doses to show a difference in half-lives, but a comparison of available data regarding the same dose actually showed that there was little if any difference between the half-lives of Mardiguian EP 40,144 and the '618 patent.

Based on the foregoing, the court concludes that Amphastar, by clear and convincing evidence, has met "its initial burden of identifying for the court those portions of the materials on file that it believes demonstrates the absence of any genuine issue of material fact" with respect to Aventis' failure to disclose material information.¹² See *T.W. Elec. Serv., Inc.*, 809 F.2d at 630. Therefore, the burden of production now shifts to Aventis to establish "specific facts showing that there is a genuine issue for trial." *Id.*

Aventis opposes Amphastar's motion on four general grounds. First, Aventis contends that the studies and data cited by Amphastar were not Mardiguian EP 40,144 admixtures. Second, Aventis

¹² As discussed more fully below, the court notes that in determining whether Amphastar met its initial burden, the court did not consider the Dawes Study and the Bara Study.

contends that errors in the half-life data of Example 6 actually favor the prior art. Third, Aventis contends that the Examiner considered the half-life data reported in Example 6 insignificant and relied only on comparison of mean half-lives derived from the underlying data. Finally, Aventis contends that Dr. Uzan told the Examiner that he was comparing different dosages. The court will consider each of these arguments.¹³

(i.) Prior Art Studies

As a preliminary matter, the court will first address the prior art studies of Dawes, Bara, Aiach/Fourtillan, and Frydman/Duchier because whether these studies are controverted will affect which evidence the court will consider when addressing the remaining arguments below.

Aventis contends that the LMWH tested in the studies were not Mardiguian EP 40,144 admixtures. Specifically, Aventis claims that Lot 573, the batch that is the subject of the Aiach/Fourtillan study was not an admixture prepared according to Mardiguian EP 40,144. Moreover, Aventis claims that Lot 930, the batch that is the subject of the Dawes Study and Bara Study, was also not prepared according to Mardiguian EP 40,144. Therefore, Aventis asserts that the Dawes and Bara Studies are not Mardiguian EP 40,144 products and the court should not

¹³ The court notes that Aventis also opposes Amphastar's motion on the ground that Dr. Uzan's comparison of half-lives at different dosages was reasonable. The court will address this argument in the intent section below.

consider the half-lives reported in the Dawes and Bara Studies as reflecting the half-lives of Mardiguian EP 40,144.

The court concludes based on evidence submitted by Aventis that a reasonable jury could find that the Dawes and Bara Studies were not prepared according to Mardiguian EP 40,144. *See Anderson*, 477 U.S. at 252, 106 S.Ct. 2505. Due to this controverted fact, the court concludes that whether the omission of the Dawes and Bara Studies constituted a failure to disclose material information is a genuine issue of fact. *See Molins PLC*, 48 F.3d at 1178. The court therefore will not consider the half-lives reported in the Dawes and Bara Studies.

It is uncontroverted that the Aiach/Fourtillan study is the source of the data in paragraph (3) of Example 6 of the '618 patent, as well as Table III attached to the Second Uzan Declaration filed during the prosecution of the '618 patent. Example 6 of the '618 patent specifically states that the data in paragraph (3) relates to Mardiguian 40,144. Moreover, it is uncontroverted that the Frydman/Duchier study is described in Example 6 of the '618 patent, and is the source of the data in paragraph (1) of Example 6 and Tables X and XI in the Second Uzan Declaration.

It is uncontroverted that Aventis represented to the PTO that the Aiach/Fourtillan Study relates to the Mardiguian EP 40,144, and it is further uncontroverted that the Aiach/Fourtillan Study relates to the Mardiguian EP 40,144. The court will also consider the Frydman/Duchier study because it is factually undisputed that it is the source of data represented in the '618 patent. The court will not

however, consider the Dawes and Bara studies for any purpose.

**(ii.) Errors in the Half-Life Data of Example 6
Favor the Prior Art and Militate Against
Patentability**

Aventis contends that errors in the half-life data of Example 6 favor the prior art. Specifically, Aventis contends that Subparagraphs (1), (3) and (4) of Example 6 admittedly contain errors in the reported percentages of patients having the specified half-lives. For example, subparagraph (3) purports to state the percentage of cases having a half-life longer than 4 1/2 hours, which, if reported correctly, would be 0%. However, subparagraph (3) reports 17%, which favors the Mardiguian EP 40,144 admixture for half life longer than 4 1/2 hours. Therefore, Aventis concludes that while Example 6 has errors, those errors would actually militate against patentability because they erred in Mardiguian EP 40,144's favor.

Aventis' contention fails because it depends on the assumption that an increase in dose yields a longer half-life. Yet, Aventis submits no evidence that in the context of Mardiguian EP 40,144 or the '618 patent, half-life increases with doses between 40 mg and 60 mg. The closest Aventis comes to producing such evidence is Dr. Uzan's statement that "the probability of having higher pharmacological parameters is higher with a higher dose than it is with a lower dose." This general statement does not create a genuine issue of material fact because it is not specific, is unconnected to the Mardiguian patent or LMWHs in general, and is contradicted by other credible evidence. *Univ. of W. Va. v. Van Voorhies*, 278 F.3d 1288, 1299 (Fed. Cir. 2002) ("[S]elf-serving,

uncorroborated [evidence] do[es] not create a genuine issue of material fact to preclude summary judgment in light of the overwhelming evidence and admissions"). The Frydman/Duchier Study which studied the '618 patent indicates that half-life does not increase with doses between 40 mg and 60 mg. The Frydman/Duchier Study reported half-life by dose as follows:

<u>Dose</u>	<u>Mean +/-Standard Deviation</u>
20 mg	4.18 +/-2.21h
40 mg	4.36 +/-1.07h
60 mg	3.70 +/-0.82h
80 mg	3.46 +/-0.86h

This table shows that the half-life for a 60 mg dose is approximately 0.66 hours less than for a 40 mg dose. Moreover, the half-life for a 60 mg dose of Mardiguian 40,144 is 3.33 hours +/-0.69, which suggests that Mardiguian 40,144's half-life is not significantly different than the '618 patent. In sum, because Aventis submits no evidence from which a reasonable jury could find that the 60 mg dose favored Mardiguian 40,144, Aventis does not create a genuine issue of material fact that its error, namely omitting the dosage of Mardiguian 40,144, militates against patentability. Based on the evidence before the court, comparing the 60 mg dose of Mardiguian with the 40 mg dose of the '618 patent actually militates in favor of patentability.

(iii.) Significance of Example 6

Aventis contends that the Examiner considered the half-life data reported in Example 6 insignificant and relied only on comparison of mean half-lives derived from the underlying data. In support of this claim, Aventis cites the Second Uzan Declaration,

which abandoned the percentage calculations of the compared half-lives and focused instead on the means of the compared half-lives. Therefore, based on the Second Uzan Declaration, Aventis concludes "the patentee exclusively relied on comparisons of mean half-life data calculated from the entire set of patient data at a given dose for distinguishing the Mardiguian [40,144]."

Aventis' argument that the Examiner "declined to rely on the half-life percentages reported in Example 6 and the comparison by Dr. Uzan in his declaration" is essentially an argument that such prior representations are not material.¹⁴ In the context of inequitable conduct, materiality is defined in Section 1.56. In relevant part, Section 1.56 defines material information as noncumulative information that opposes an argument of unpatentability relied on by the PTO or asserts an argument of patentability. As discussed above, Example 6 purports to "illustrate[] the increase in stability, in vivo, of the mixtures of the invention, expressed by their plasma half-life." This is an argument of patentability. Thus, as defined by Section 1.56, Example 6 is material.

Moreover, the Federal Circuit has made clear that for a misrepresentation to be material, it "need not be relied on by the examiner in deciding to allow the patent. The matter misrepresented need only be within a reasonable examiner's realm of

¹⁴ Noteworthy is the lack of evidence to support Aventis' claim of non-reliance by the Examiner. This contention appears grounded in speculation.

consideration.” *Merck & Co., Inc. v. Danbury Pharmacal, Inc.*, 873 F.2d 1418, 1421 (Fed. Cir. 1989). Section 1.56 does not state, and Aventis cites no law suggesting, that evidence which is material under section 1.56 can become immaterial because the patent applicant submitted subsequent non-cumulative information in support of patentability or in opposition to an argument of unpatentability. The fact that Aventis submitted data reflecting the mean half-lives of the LMWHs does not indicate that the Examiner stopped relying on the percentages. Indeed, in an amendment filed by Aventis on June 1, 1994, Aventis called the subsequent data “additional data,” which indicates that it was not cumulative. Further, the amendment only reported the same data in a different manner. Finally, even if the Examiner relied only on the reported mean half-lives, this does not render Example 6 irrelevant because Aventis continued to use the same underlying data—a 60 mg Mardiguian EP 40,144 dose and a 40 mg ‘618 patent dose—to establish the same point, mainly that the ‘618 patent showed a “substantial” improvement in half-life over Mardiguian EP 40,144.

(iv.) Dr. Uzan’s Disclosures to the Examiner

Aventis contends that Dr. Uzan disclosed to the PTO that he used different dosages in comparing the half-lives of the Mardiguian and Debric admixtures. In support of this contention, Aventis submits the First Uzan Declaration and an Amendment filed on June 1, 1994. The First Uzan Declaration states:

“[T]he claimed formulations have also been compared with those set forth in Mardiguian, European Patent 0,040,144. As discussed therein, the claimed formulations had a

plasma half life longer than 4 1/2 hours in 45% of the cases in contrast to Mardiguan who achieved such a half life in only 17% of the cases. **This represents an increase in 250% in the half life and is very significant because it enables the same effect to be achieved with lower dosages.**" (emphasis added)

An Amendment filed by Aventis on June 1, 1994, similarly states:

"As for results obtained by applicant, it is noted that the Patent Office is concerned that the evidence provided to date by applicant to distinguish his invention from the applied prior art is not statistically significant. To this end, additional data has been provided setting forth the sampling from which the data relied upon by applicant was obtained. The results also demonstrate that different half-lives were obtained for the claimed preparation versus the closest preparation of Mardiguan. In particular, the half life obtained for the claimed preparation was 4.36 +/- 1.07 hours where as that for Mardiguan was 3.33 +/- 0.2. **This is approximately a 30% difference in results and is significant in that it means that the claimed preparations can be administered in significantly lower doses.**" (emphasis added).

Aventis also submits the deposition of Dr. Uzan. In the deposition, Dr. Uzan interprets his statement in his first declaration as "say[ing] the comparison is a comparison between two doses of which one is lower than the other."

With respect to the First Uzan Declaration and the June 1, 1994 Amendment, neither of these statements can reasonably be interpreted as meaning that the half-life data was based upon different dosages. The two documents purportedly compare the '618 patent and Mardiguian EP 40,144 to reveal a "significant" difference in response to a lack of statistical significance from prior art. In other words, the language in these documents means that the comparison between these two admixtures is significant because the results establish that one can be administered at a lower dose than the other. It is not an illustration of application at a lower dose. It is "significant ... because it enables" administration of the LMWH at a lower dose.

Dr. Uzan's statement in his deposition interpreting the First Uzan Declaration is specious and cannot create a genuine issue of material fact. *See Van Voorhies*, 278 F.3d at 1299. It is clear from the documentary evidence that there is no suggestion that the data was obtained from preparations at different doses. Dr. Uzan concedes as much:

Question: Do you, anywhere in Exhibit 16 [First Uzan Declaration], tell the Examiner that the Mardiguian formulations which you are reciting data for in the second sentence involve a 60 milligram dose?

Answer: No, my declaration is not specific to that degree.

b. Intent to Deceive the PTO

Inequitable conduct requires intent to deceive the PTO. *See Molins PLC*, 48 F.3d at 1178. If the materiality of a misrepresentation of a material fact is high, then a lesser showing of intent can be

sufficient. See *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1381 (Fed. Cir. 2001). "Intent need not, and rarely can, be proven by direct evidence." *Merck & Co., Inc.*, 873 F.2d at 1422 (Fed. Cir. 1989). Rather, in the absence of a credible explanation, intent to deceive is generally inferred from the facts and circumstances surrounding a knowing failure to disclose material information. See *Paragon Podiatry Lab., Inc. v. KLM Labs. Inc.*, 984 F.2d 1182, 1193 (Fed. Cir. 1993).

(i.) High Materiality

Aventis' representations regarding half life during prosecution of the '618 patent made the purported significantly improved half-life highly material to patentability. As discussed above, Aventis referred the Examiner to the increased half-life established in Example 6 of the '618 patent in response to a rejection of obviousness. On August 3, 1992, in response to the Examiner's contention that the comparative data in Example 6 was not persuasive, Aventis reiterated its position that '618 was patentable over Mardiguian EP 40,144 because of the purported increase in half-life. The PTO was not persuaded. On April 16, 1993, Aventis submitted evidence purporting to show a 250% increase in half-life. Aventis also submitted the First Uzan Declaration and represented a "very significant" increase in half life. The Examiner again rejected Aventis claims because Aventis "failed to provide evidence that the alleged difference between the half-life of the Mardiguian product and that of the instant mixture is statistically significant." Thereafter, on November 20, 1993, Aventis made the further representation that:

[D]ifferent half lives were obtained for the claimed preparation versus the closest preparation for Mardiguian. In particular, the half-life obtained for the claimed preparation was 4.36 \pm 1.07 hours whereas that for Mardiguian was 3.33 \pm 0.2 hours. This is approximately a 30% difference in results and is significant in that it means that the claimed preparations can be administered at significantly lower doses.

Aventis' representations satisfied Section 1.56 as to materiality. Aventis referred to the purported improved half-life of the '618 patent on at least four occasions in opposition to "argument[s] of unpatentability relied on by the Office" and asserted an "argument of patentability" based on the improved half-life of the '618 patent over Mardiguian EP 40,144. These repeated representations establish that Aventis created high materiality for half-life. Militating even further in favor of a high materiality is the fact that the Examiner allowed the patent after the last representation purporting to establish a statistically significant improvement in half-life based on the half-life obtained for the '618 patent, which was 4.36 \pm 1.07 hours, whereas that for Mardiguian EP 40,144 was 3.33 \pm 0.2 hours.

(ii.) Credible Explanation

Aventis contends that Dr. Uzan's comparison of half-lives at different dosages was reasonable and it provides a variety of explanations. Essentially relying on a contention above-that errors in the half-life data of Example 6 actually favor the prior art Dr. Uzan stated in his deposition:

"So, in this case, I gave preference to Mardiguian product in selecting the dose

that I selected which was the higher dose than the Debie dose. If I had done the opposite, I would have, to some extent, given an advantage to the Debie admixture, but I did not. On the contrary, I gave advantage to the [Mardiguan patent], so there is nothing abnormal there."

In addition to this alleged advantage, Aventis also argues that it chose to use the 40 mg dose of the '618 patent because the 60 mg dose caused bleeding in postoperative patients. Finally, Aventis argues that the 60 mg dose in the Frydman/Duchier Study was not confirmed while the 40 mg dose was confirmed in a separate study. Based on these three grounds, Aventis asserts that Dr. Uzan's comparison of half-lives at different dosages was reasonable and thus a credible explanation for the omission.

Aventis' contention fails generally because the question is not whether use of the 40 mg dose was reasonable. The issue is whether Dr. Uzan's two declarations, which affirmatively represented that there was a "significant" difference in the half-life between Mardiguan EP 40,144 and the '618 patent by comparing a 60 mg dose of the Mardiguan patent to a 40 mg dose of the '618 patent, was an omission of a material fact, especially in light of the fact that the same study showed the 60 mg dose of the '618 patent established that the half-lives were much closer.

Aventis' specific arguments also fail. As discussed more fully above, other than Dr. Uzan's unsupported and general claim, Aventis submits no evidence that the 60 mg dose gave preference to Mardiguan EP 40,144. Finally, Dr. Uzan's explanations-that he chose to use the 40 mg dose of the '618 patent because the 60 mg dose caused

bleeding in post-operative patients and that the 60 mg dose was not verified—are not persuasive because he used the same 60 mg dose in paragraph (1) of Example 6.

**(iii.) Facts and Circumstances Surrounding
Failure to Disclose Material Information**

The facts and circumstances surrounding the failure to disclose the dose differential militate in favor of Aventis' intent to deceive. By comparing different doses, Aventis represented to the Examiner that the half-life "obtained for the claimed preparation was 4.36 ± 1.07 hours whereas that for Mardiguan was 3.33 ± 0.2 hours. This is approximately a 30% difference in results and is significant in that it means that the claimed preparations can be administered at significantly lower doses." Indeed, had the 60 mg dose of Mardiguan been compared to the 60 mg dose of the '618 patent, results would have indicated that the mean half-life for the '618 patent was 3.70 ± 0.82 hours and the mean half-life for Mardiguan EP 40,144 was 3.33 ± 0.2 hours. Whether the Examiner would have concluded that this difference in half-life would "distinguish [the] invention from the applied prior art" in a statistically significant way is unknown. It is unknown because Aventis deprived the Examiner of this opportunity by repeatedly misrepresenting the evidence. This foregoing fact supports a strong inference of intent by Aventis to deceive the PTO. *See Paragon*, 984 F.2d at 1182.

c. Weighing Materiality and Intent

The court must weigh materiality and intent "to determine if equity warrants a finding of inequitable conduct." *Ulead Sys., Inc.*, 351 F.3d at 1144. Based on the totality of the circumstances, including

Amphastar's weighty uncontroverted evidence establishing materiality and intent to deceive and Aventis' scintilla of evidence in opposition thereto, the court concludes that no genuine issues of material fact exist and Amphastar is entitled, as a matter of law and equity, to summary judgment against Aventis on its affirmative defense and counterclaim based on inequitable conduct. As a result, the '618 patent is unenforceable.¹⁵ See *Ulead Sys., Inc.*, 351 F.3d at 1144.

IV.

DISPOSITION

ACCORDINGLY, IT IS ORDERED:

(1) Defendant Amphastar Pharmaceuticals, Inc.'s motion for summary judgment based on inequitable conduct is GRANTED;

(2) Defendant Amphastar Pharmaceuticals, Inc.'s motion for summary judgment of invalidity based on indefiniteness is DENIED as moot;

(3) Defendant Amphastar Pharmaceuticals, Inc.'s motion for summary judgment of invalidity pursuant to 35 U.S.C. § 102 is DENIED as moot.

¹⁵ By reason of having granted Amphastar's motion for summary judgment based on inequitable conduct, the court will deny as moot Amphastar's remaining motions for summary judgment, namely Amphastar's motion for summary judgment of invalidity based on indefiniteness and Amphastar's motion for summary judgment of invalidity based on 35 U.S.C. § 102.

124

4

No. 08-937

FILED

MAR 27 2009

OFFICE OF THE CLERK
SUPREME COURT, U.S.

IN THE
Supreme Court of the United States

AVENTIS PHARMA S.A.
and AVENTIS PHARMACEUTICALS, INC.,

Petitioners,

v.

AMPHASTAR PHARMACEUTICALS, INC.
and TEVA PHARMACEUTICALS USA, INC.,

Respondents.

ON PETITION FOR A WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

**BRIEF IN OPPOSITION FOR RESPONDENT
AMPHASTAR PHARMACEUTICALS, INC.**

JAN P. WEIR
STRADLING YOCOA CARLSON & RAUTH
660 Newport Center Drive
Suite 1600
Newport Beach, CA 92660
(949) 725-4000

*Counsel for Respondent
Amphastar Pharmaceuticals, Inc.*



QUESTION PRESENTED

The question the petition purports to present was not timely raised below and is not presented by the facts in this case. The district court heard the evidence, made credibility determinations, and specifically found that (a) Aventis intended to deceive the Patent and Trademark Office ("PTO") and (b) "negligence played no role" in the deception. Based on those findings and an earlier determination (not challenged here) that the information that Aventis misrepresented and concealed from the PTO was highly material to patentability, the district court held that Aventis' patent was unenforceable due to inequitable conduct. The Federal Circuit affirmed, finding no clear error in the district court's fact findings and credibility determinations and no abuse of discretion in the ultimate determination of inequitable conduct. The questions actually presented are:

(1) Did the district court commit clear error in finding that Aventis intended to deceive the PTO?

(2) Did the district court abuse its discretion in holding Aventis' patent unenforceable due to inequitable conduct, given Aventis' intent to deceive and the high materiality of the deception?

STATEMENT PURSUANT TO RULE 29.6

Respondent, Amphastar Pharmaceuticals, Inc., has no parent corporation and no publicly held company owns 10% or more of its stock.

TABLE OF CONTENTS

	<i>Page</i>
QUESTION PRESENTED	i
STATEMENT PURSUANT TO RULE 29.6 ...	ii
TABLE OF CONTENTS	iii
TABLE OF CITED AUTHORITIES	v
STATEMENT OF THE CASE	1
1. The Proceedings Below Specifically Focused on an Intent to Deceive	3
2. Aventis Acknowledged Below That the District Court Specifically Found an Intent to Deceive	10
REASONS FOR DENYING THE PETITION	12
I. THE COURTS BELOW EXPRESSLY FOUND AN INTENT TO DECEIVE SEPARATE FROM MATERIALITY AND EXPRESSLY FOUND THAT AVENTIS AND DR. UZAN WERE NOT MERELY NEGLIGENT	13
II. THE DISTRICT COURT DID NOT CLEARLY ERR IN FINDING AN ABSENCE OF NEGLIGENCE	17

Contents

	<i>Page</i>
III. THERE IS NO CONFLICT AMONG THE LOWER COURTS	18
IV. THERE IS NO CONFLICT BETWEEN THE FEDERAL CIRCUIT'S APPROACH AND THIS COURTS PRECEDENTS ...	24
V. THERE IS NO SOUND REASON TO OVERTURN THIS COURT'S LONG STANDING EQUITABLE RULE REGARDING PATENTS OBTAINED BY INEQUITABLE CONDUCT	25
CONCLUSION	28

TABLE OF CITED AUTHORITIES

Page

FEDERAL CASES

<i>Adams v. Robertson</i> , 520 U.S. 83 (1997)	11, 12
<i>Anderson v. Bessemer City</i> , 470 U.S. 564 (1985)	17, 23
<i>Anderson v. Liberty Lobby Inc.</i> , 477 U.S. 242 (1986)	3
<i>Board of County Comm'rs v. Brown</i> , 520 U.S. 397 (1997)	24
<i>Bressler, U.S.A.I., L.P. v. Styker Sales Corp.</i> , 267 F.3d 1370 (Fed. Cir. 2001)	24
<i>Burlington Indus. Inc. v. Dayco Corp.</i> , 849 F.2d 1418 (Fed. Cir. 1988)	26
<i>Butler v. Watkins</i> , 80 U.S. 456 (1872)	16, 24
<i>Claflin v. Commonwealth Insurance Co.</i> , 110 U.S. 81 (1884)	16
<i>Cochran v. United States</i> , 157 U.S. 286 (1895)	24
<i>Davis v. United States</i> , 417 U.S. 333 (1974)	19

Cited Authorities

	<i>Page</i>
<i>Falls City Industries, Inc. v. Vanco Beverage, Inc.</i> , 460 U.S. 428 (1983)	11
<i>Ferring B.V. v. Barr Laboratories, Inc.</i> , 437 F.3d 1181 (2006)	22
<i>FMC Corp. v. Hennessy Industries, Inc.</i> , 836 F.2d 521 (Fed. Cir. 1987)	24
<i>GFI, Inc. v. Franklin, Corp.</i> , 265 F.3d 1268 (Fed. Cir. 2001)	14, 15
<i>Graham v. John Deere Co. of Kansas City</i> , 383 U.S. 1 (1966)	27
<i>Hazel-Atlas Glass Co. v. Harfford-Empire Co.</i> , 322 U.S. 238 (1944)	13
<i>Hewlett-Packard Co. v. Bausch & Lomb, Inc.</i> , 882 F.2d 1556 (Fed. Cir. 1989)	21, 22, 24
<i>Keystone Driller Co. v. General Excavator Co.</i> , 290 U.S. 240 (1933)	13
<i>Kingsdown Medical Consultants, Ltd.</i> <i>v. Hollister, Inc.</i> , 863 F.2d 807 (Fed. Cir. 1988)	19, 20, 22, 24
<i>Manville Sales Corp. v. Paramount System, Inc.</i> , 917 F.2d 544 (Fed. Cir. 1990)	14, 15, 22

Cited Authorities

	<i>Page</i>
<i>Michalic v. Cleveland Tankers, Inc.</i> , 364 U.S. 325 (1960)	26
<i>Norton v. Curtiss</i> , 433 F.2d 779 (C.C.P.A. 1970)	27
<i>Praxair, Inc. v. ATMI, Inc.</i> , 543 F.3d 1306 (Fed. Cir. 2008)	22
<i>Precision Instrument Manufacturing Co.</i> <i>v. Automobile Maintenance Machine Co.</i> , 324 U.S. 806 (1945)	13, 27
<i>Ulead System, Inc.</i> <i>v. Lex Computer & Management Corp.</i> , 351 F.3d 1139 (Fed. Cir. 2003)	14
<i>United States v. United Foods, Inc.</i> , 533 U.S. 405 (2001)	11
<i>United States v. Yermian</i> , 468 U.S. 63 (1984)	24
<i>Wisniewski v. United States</i> , 353 U.S. 901 (1957)	18, 19

*Cited Authorities**Page***DOCKETED CASES***Aventis Pharma S.A.**v. Amphastar Pharmaceuticals, Inc.,*

No. 07-1280 (Fed. Cir. May 14, 2008) 10

FEDERAL STATUTES

28 U.S.C. § 1295(a)(1) 18

STATEMENT OF THE CASE

This case involved Aventis' intentional, affirmative misrepresentation that the low molecular weight heparin ("LMWH") compounds disclosed in its '618 patent have a "significantly" greater half-life than the LMWHs claimed in prior art European Patent No. 40,144 ("EP 40,144").¹ App. 8a, 10a, 43a-45a, 57a, 59a. The undisputed evidence at trial established that there was no difference in half-life when the compositions were compared at the same dose. App. 45a, 73a.² This was readily apparent to Aventis and Dr. Uzan. App. 74a; *see* Appendix to the Federal Circuit Court of Appeals

¹ Aventis states at p. 2:28-3:1 of its petition, that it invented novel compositions of low molecular weight heparins ("enoxaparin") which were the subject of the '618 patent. The full enoxaparin story did not begin with the '618 patent. Rather, an Aventis scientist by the name of Jean Mardiguian first developed enoxaparin in the early 1980s. Aventis applied for a patent based upon Mardiguian's work in France in 1980. App. 41a-42a, 111a-112a. Aventis filed related applications in Europe and the United States. The European patent application issued as E.P. 40,144 and the related United States application was abandoned. App. 5:7-9; C.A. App. 4064-65.

² The contention that the '618 patent disclosed different compositions from E.P. 40,144 was dubious from the outset. The '618 patent used the same three step manufacturing process disclosed in the E.P. 40,144 patent (i.e. salification, esterification, and depolymerization of porcine heparin. (*Compare* C.A. App. 253, Col. 5:4-53 ('618 disclosure) *with* C.A. App. 4052, 4054-55 (E.P. 40,144 disclosure). The resulting low molecular weight heparins had the same chemical structure (C.A. App. 10474:12-21) and, as admitted, exhibited no significant difference in half-life when compared at the same dose (App. 73a-74a). *See also infra* note 3.

("C.A. App.") 10084, 10136. Nevertheless, Aventis and Dr. Uzan repeatedly and affirmatively misrepresented that their experimental data showed that the claimed compositions had "significantly" higher half-life. App. 8a, 10a, 43a-45a, 57a, 59a. Not only did Aventis and Dr. Uzan affirmatively misrepresent there was a difference in half-life; they intentionally omitted the dosage information in data given to the PTO that would have revealed the true fact that they were comparing the compositions at different doses and that a same-dose comparison showed no difference in half-life. App. 84a. Thus, this is a case at the extreme end of violating the duty of candor owed by applicants to the PTO. This case involves a party deceiving the PTO into issuing a patent through the knowing falsification of experimental data and through affirmative, highly material misrepresentations regarding that data coupled with the intentional concealment of the known true facts. App. 89a-90a.³

³ As mentioned in note 1, *supra*, Aventis abandoned its related U.S. application to the E.P. 40,144 patent. Thus, when it came time to market enoxaparin in the United States, Aventis realized that it did not have "market protection." App. 112a; C.A. App. 1895, 4064-65, 10021:9-10022:1. Aventis therefore filed a new patent application (which ultimately issued as the '618 patent), naming Roger Debie as the inventor, covering the same drug covered by the earlier E.P. 40,144 patent. At the same time that Aventis was contending that the '618 patent covered a new drug during the prosecution of the '618 patent in the United States, Aventis was representing to the French Patent Office that the French precursor to E.P. 40,144 covered enoxaparin in order to obtain a patent term extension in France. C.A. App. 4005. Thus, at the same time Aventis was representing to different government entities that two different patents filed nearly ten years apart covered the same drug.

1. The Proceedings Below Specifically Focused on an Intent to Deceive

Aventis' suggestion that the district court and Federal Circuit wrongly applied a negligence standard in finding inequitable conduct in this case is meritless in light of the proceedings below.

Inequitable conduct was first found on summary judgment by District Judge Timlin. App. 46a, 128a-142a. In so holding, Judge Timlin expressly found an intent to deceive. App. 137a-141a. Aventis appealed, contending that summary judgment was not appropriate on the issue of intent to deceive. App. 46a-47a. Rather, Aventis argued that it was necessary to view Dr. Uzan's live testimony in order to evaluate his credibility and the reasonableness of his explanation. App. 47a, 106a. The Federal Circuit panel affirmed Judge Timlin's ruling that the information at issue was highly material to patentability and agreed that an intent to deceive could reasonably be inferred from the evidence, but held that a trial was needed to determine if Dr. Uzan's innocent explanations for his conduct were credible. App. 46a, 109a.⁴

⁴ Notably, Judge Rader, who dissented in the second appeal, joined the opinion in the first appeal. At page 5:16-22 of the petition, Aventis misstates the holding of the Federal Circuit on the first appeal by contending that as "the party charged with inequitable conduct—[Aventis] was required to demonstrate its innocence in order to prevent a finding of deceptive intent. . . ." The Federal Circuit made no such holding. Rather, the Federal Circuit merely found that Aventis, as the non-movant on a motion for summary judgment, had to raise a genuine issue of material fact. App. 106a; accord *Anderson v. Liberty Lobby Inc.*, 477 U.S. 242, 248 (1986).

On remand, a different district judge (Judge Pfaelzer) followed the Federal Circuit's mandate, held trial on the specific issue of intent to deceive, and found that Aventis did indeed intend to deceive the PTO. App. 40a, 48a.

The entire purpose of the trial on remand was to address the issue of intent to deceive by viewing Dr. Uzan's live testimony. App. 40a, 78a-79a, 86a. After seeing and hearing Dr. Uzan's live testimony, the district court found:

[B]ased on the totality of the facts and circumstances surrounding Dr. Uzan's repeated omissions, the Court hereby finds the Defendants have shown by clear and convincing evidence that Dr. Uzan intended to deceive the PTO.

App. 90a. Importantly, the district court did not simply leap to a conclusion of intent to deceive. The district court made detailed findings of fact and credibility determinations before specifically finding an intent to deceive. It found:

- The keystone of Aventis' strategy for overcoming the PE's rejections was to distinguish the '618 compositions from the E.P. 40,144 composition based upon their superior half-life. App. 43a; *see* App. 56a-63a; App. 58a ("Aventis attacked sameness based on a difference in properties.").
- Aventis directed the PE to the half-life study of Example 6 of the '618 patent to support Aventis' claims of superior half-life. *Id.*; *see* App. 57a

(quoting Aventis to the PTO) (“[I]t necessarily follows that the formulations of the invention could not possibly be the same as those of the European patent. As is notoriously well established, *compounds and their properties are inseparable* and thus, when two compounds exhibit different properties it follows that they *must necessarily be of different structure.*”) (emphasis added).⁵

- Throughout the patent prosecution, Aventis and Dr. Uzan affirmatively represented that Example 6 “clearly demonstrate[d]” that the ’618 compositions had a significantly longer half-life than the E.P. 40,144 compositions. App. 45a, 59a (quoting Dr. Uzan) (“[Example 6] represents an increase in 250% in half-life and is very significant . . .”).
- Dr. Uzan had compared a 60 mg dose study of the E.P. 40,144 compositions to a 40 mg dose study of the ’618 compositions and at no time did Aventis or Dr. Uzan disclose at what dosage the half-life study in subparagraph (3) of Example 6 had been made. *Id.*
- There was no statistically significant difference in half-life when the E.P. 40,144 compositions when compared to the ’618 compositions at the

⁵ At pages 3:35-4:2 and 8:9-16 of its petition, Aventis misleadingly contends that Example 6 was intended only to illustrate the “increase in stability” of the ’618 compositions over the E.P. 40,144 compositions and not compositional difference. As the district court correctly found, however, it was Aventis who specifically used Example 6 to establish compositional difference during the prosecution of the ’618 patent.

same dose, and Aventis and Dr. Uzan “cherry picked” the data selecting the one dose permitting a favorable comparison to E.P. 40,144. *Id.*; App. 74a; see App. 73a (“Only the 40 mg dose showed a statistically significant difference over E.P. ’144.”).⁶

- The different dose comparison was “incapable of proving anything at all about the relative half-lives of the ’618 and E.P. ’144 LMWHs” App. 83a; see App. 86a (“[The different dose comparison] “could not prove anything the PE wanted to know.”).
- Dr. Uzan’s prosecution history declarations showed that Dr. Uzan knew the materiality of the misrepresentations he was making to the Examiner. It was “Dr. Uzan’s goal” to prove a difference in properties to overcome the examiner’s objections, and it was “inconceivable that this fact was unclear to Dr. Uzan.” App. 81a (“The language of his First Declaration . . . declares his familiarity with the Second Office Action The Second Declaration . . . also demonstrates that Dr. Uzan knew the problem of insufficient proof of statistical significance was among [the Examiner’s] objections.”).

⁶ The Duchier study, from which Dr. Uzan obtained the half-life data relating to the ’618 compositions, measured half-life as 20 mg, 40 mg, 60 mg, and 80 mg doses. App. 69a. It was undisputed that there was no statistical difference in half-life between the E.P. 40, 144 compositions when they are compared to the 20 mg, 60 mg, and 80 mg dose studies for the ’618 patent. App. 73a-74a. Thus, Aventis and Dr. Uzan cherry-picked the only dose comparison – a different dose comparison of 40 mg to 60 mg – that showed any difference at all. App. 74a.

- “Put simply, Dr. Uzan knowingly gave the PE a narrow answer to her broad question, and then represented that in so doing he had answered her question broadly.” App. 83a.⁷

At pages 7-8 of its Petition, Aventis misleading suggests that the district court did not make any finding that Dr. Uzan knew about the materiality of his misrepresentations and omissions. Aventis’ Petition for Certiorari (“Pet.”) at 7-8. “Regarding knowledge,” Aventis refers only to the district court’s finding that “Dr. Uzan admitted to knowing that he was comparing the half-lives . . . at different doses.” *Id.* at 7. Aventis argues that this fact is of “limited significance.” Aventis then argues at page 8 that the district court was “effectively eliminating the requirement that the patent applicant have actual knowledge that the omitted information is material” *Id.* at 8.

Aventis misleadingly ignores the district court’s express finding that Dr. Uzan also knew of the materiality of his misrepresentations and omissions as evidenced by Dr. Uzan’s prosecution history declarations. App. 81a. Further, Aventis does not cite this Court to any evidence or testimony from Dr. Uzan that Dr. Uzan did not know the materiality of his misrepresentations and omissions. Thus, there is simply no evidentiary support for any argument from Aventis that the district court’s findings of knowledge of materiality were clearly erroneous.

⁷ At page 3:18-22 of its petition, Aventis states that Respondents premised their case on a simple omission made by Dr. Uzan. As can be seen from the district court’s decision, Respondents presented a great deal more evidence of intent to deceive than Aventis claims.

The district court also expressly found that “[n]egligence played no role in Aventis and Dr. Uzan’s failure to disclose the E.P. ’144 dose information.” App. 89a. Again, the district court painstakingly made specific findings of fact regarding the absence of negligence. The district court found:

- Aventis and Dr. Uzan concealed “any fact to the PTO even reflecting that a 60 mg dose of the Mardiguian E.P. ’144 LMWH was compared” and any fact that would have ignited the examiner’s suspicion that the half-life comparison was flawed. App. 84a.
- Aventis and Dr. Uzan also failed to disclose that a dose-ranging analysis was used, and that Dr. Uzan’s was allegedly focused only on the prevention of deep vein thrombosis in high-risk patients undergoing orthopedic surgery. Dr. Uzan selected the “clinically relevant dose,” and he believed that half-lives of the compositions were dose independent. Example 6 was not “a well-controlled prospective trial, but a meta-analysis comparing data from three different studies performed for three different purposes at three different times.”⁸

⁸ Example 6 was misleadingly written as reporting a single well-controlled study. Example 6 began by reporting the results of a “first pharmacokinetic study.” Subparagraph (2) stated that the comparison is made “under identical dosage conditions.” App. 43a-44a n.3. Subparagraph (3) used half-life data at 4.5 hours, the same time used for the 40 mg dose studies of the ’618 compositions whereas the 60 mg study for the claimed composition used 3.7 hours clearly leading to the conclusion that the subparagraph (3) study was done at 40 mg. *Id.*

The district court rejected Dr. Uzan's "clinically relevant dose excuse," holding that it suffered from "a total absence of indicia of credibility." App. 88a-89a.⁹ The district court summed up its analysis by finding that "[c]onsistently omitting so many references involves the application of diligence, not the commission of negligence." App. 85a.

Aventis then appealed. The Federal Circuit applied the proper standard of review and found no clear error in the district court's findings of fact and credibility determinations. The Federal Circuit found that the evidence supported a finding of an intent to deceive:

Here, however, in contrast to any inadvertent omissions made during prosecution, there is sufficient evidence of concealment to warrant a determination that the dose information was intentionally withheld.

App. 30a.

⁹ At page 3:30-35 of its petition, Aventis attempts to downplay Dr. Uzan's involvement in the preparation and prosecution of the '618 patent. This is another late shift in position. Aventis relied heavily on Dr. Uzan in both the preparation and prosecution of the '618 patent and the proceedings below. Dr. Uzan's Example 6 and his declarations were the only source of data used to overcome the examiner's rejections. App. 44a-45a. Indeed, the named inventor, who Aventis did not use as a prosecution expert, did not agree with Dr. Uzan's different dose comparison, testifying that it was "meaningless." App. 67a n.12. Every other person at Aventis involved in the prosecution of the '618 patent claimed not to remember anything about the preparation of the patent application or its prosecution. App. 78a n.17.

In view of the procedural history of this case, and the express findings and rulings of the district court and Federal Circuit, there can be no doubt that the district court and Federal Circuit specifically found an intent to deceive.

2. Aventis Acknowledged Below That the District Court Specifically Found an Intent to Deceive

Though Aventis bases its petition on the contention that the district court applied a negligence standard in finding inequitable conduct in this case, Aventis did not make that argument on appeal to the Federal Circuit. Rather, Aventis repeatedly recognized that the district court had in fact found an intent to deceive. *See* Brief of Plaintiff-Appellants Aventis Pharma S.A. and Aventis Pharmaceuticals at 45, *Aventis Pharma S.A. v. Amphastar Pharmaceuticals, Inc.*, No. 07-1280 (Fed. Cir. May 14, 2008) (“The District Court Clearly Erred In Holding that Dr. Uzan Intended to Deceive the PTO”); *see also id.* at 58 (asserting that “the district court’s ultimate holding of inequitable conduct . . . fatally hinges on the clearly erroneous finding that Dr. Uzan intended to deceive the PTO.”) Instead, Aventis based its appeal on the contention that the district court committed clear error in finding an intent to deceive based upon the district court’s supposed misunderstanding of the prosecution history. *Id.*; App. 18a-20a. The Federal Circuit rejected Aventis’ argument, holding that the district court had not committed clear error regarding the prosecution of the ’618 patent. App. 21a.

Aventis did not appeal on the ground that the district court’s decision was based on negligence. Rather,

Aventis first raised this issue in its petition for rehearing, apparently following Judge Rader's dissent. Even then, Aventis did not make the arguments it makes here. In particular, Aventis did not argue that by finding that Dr. Uzan "knew or should have known" of the materiality of his misrepresentations and omissions the district court eliminated the requirement for an intent to deceive.¹⁰

Because the question Aventis presents was not timely raised it is not a proper basis for a petition for writ of certiorari. See *United States v. United Foods, Inc.*, 533 U.S. 405, 417 (2001) (refusing to consider arguments not pressed by petitioner below); *Adams v. Robertson*, 520 U.S. 83, 89 n.3 (1997) ("[W]e have

¹⁰ At page 9:23-30 of its petition, Aventis (again citing Judge Rader's dissent) also improperly suggests that the '618 patent is otherwise valid as evidenced by the PTO's decision to reissue it. As the Federal Circuit majority correctly pointed out, Judge Rader was mistaken regarding the timing of the reissue. App. 12a n.6. Further, the relevance of the reissue was extensively briefed by the parties before the district court. See C.A. App. 179-182 (Dkt. Nos. 666, 680, 687, 691, 695). Ironically, Aventis itself contended the reissue was irrelevant to inequitable conduct in order to preclude Amphastar from presenting additional evidence of inequitable conduct during the reissue proceedings. C.A. App. 131-135; *id.* at 4022:20-27 ("[W]hether Aventis committed inequitable conduct in obtaining the '618 patent will be the only issue on appeal. Amphastar's additional allegations of unenforceability based on the prosecution of the reissue patent are irrelevant to the appeal . . ."). Thus, it is entirely improper for Aventis to even suggest at this late stage that the reissue somehow cured its inequitable conduct or otherwise evidences the validity of the '618 patent. See *Falls City Industries, Inc. v. Vanco Beverage, Inc.*, 460 U.S. 428, 436 n.7 (1983) (holding that issues waived below were not before the Court).

generally refused to consider issues raised clearly for the first time in a petition for rehearing when the state court is silent on the question."'). We note that Aventis bears the burden of establishing that the issue raised in its petition was timely raised below. *Adams*, 520 U.S. at 86, 89 n.3.¹¹

REASONS FOR DENYING THE PETITION

This case involved knowing affirmative misrepresentations of experimental data and fell at the extreme end of fraud that the courts have long found sufficient to compel patent unenforceability. Aventis and Dr. Uzan, deliberately cherry-picked experimental data to create the appearance of a material difference between a claimed composition and the prior art where none existed. Aventis and Dr. Uzan misleadingly presented data in the patent application itself to suggest that compositions were being compared at "identical dosages" when in fact they were not. These misleading data were then repeatedly and specifically used to overcome the Examiner's rejections.

Never once did Aventis or Dr. Uzan reveal the true dose information for the prior art half-life study or that a different dose comparison was being made. Rather, Aventis and Dr. Uzan affirmatively misrepresented that the false difference in half-life "necessarily" showed that the compositions were different, and that the difference was "statistically significant." App. 5a-11a, 42a-45a, 113a-115a; *see id.* at 100a-101a ("Given the centrality of the

¹¹ Having acknowledged that the district court found an intent to deceive on appeal and having not timely raised its current issues, the statement in the Petition that the Federal Circuit declined "the invitation to clean its own house" is particularly misplaced.

differences in half-lives to patentability, by failing to disclose that the difference in half-lives at the same dosage was actually lower, Aventis failed to disclose material information to the PTO."). Aventis and Dr. Uzan then offered an after-the-fact excuse that the district court found suffered "from a total absence of indicia of credibility." App. 78a, 88a.

The affirmative misrepresentations and omissions of fact in this case were knowingly false and intended to deceive the Patent Office into issuing a patent. As such, they were well within the type of wrongful conduct this Court has found sufficient to hold patents unenforceable due to inequitable conduct. *See Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 818-19 (1945); *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238, 251 (1944); *Keystone Driller Co. v. Gen. Excavator Co.*, 290 U.S. 240, 245-47 (1933).

I. THE COURTS BELOW EXPRESSLY FOUND AN INTENT TO DECEIVE SEPARATE FROM MATERIALITY AND EXPRESSLY FOUND THAT AVENTIS AND DR. UZAN WERE NOT MERELY NEGLIGENT

Despite the district court's express credibility determinations and findings of fact, Aventis predicates its petition for certiorari on the contention that the district court failed to find an intent to deceive, but rather found inequitable conduct based upon high materiality applying either a strict liability or negligence standard. The argument is astonishing in view of the great pains that the district court took to make it clear that it was specifically finding an intent to deceive and that it was specifically not basing its decision on negligence.

The district court expressly held that “[m]ateriality does not,’ however, ‘presume intent, which is a separate and essential component of inequitable conduct’” App. 49a (quoting *GFI, Inc. v. Franklin, Corp.*, 265 F.3d 1268, 1274 (Fed. Cir. 2001); *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 552 (Fed. Cir. 1990)). The district court further recognized that “gross negligence is not, in and of itself, sufficient to satisfy the intent element of inequitable conduct.” App. 79a (quoting *Ulead Sys., Inc. v. Lex Computer & Mgmt. Corp.*, 351 F.3d 1139, 1148 (Fed. Cir. 2003)). The district court could not have been more clear that Amphastar and Teva had carried their burden of proving actual intent to deceive by clear and convincing evidence, and that it was not relying on negligence:

Nevertheless, because affirmatively proving intent is a burden that must lie with Amphastar and Teva at all times, the Court now separately finds that clear and convincing evidence adduced at trial independently reestablishes—and substantially strengthens—those earlier inference of intent

App. 87a. It is equally clear from the above quote that not only did the district court expressly find an intent to deceive, the district court did not shift the burden to Aventis. See App. 87a (“Nevertheless, because affirmatively proving intent is a burden that must lie with Amphastar and Teva at all times”). Indeed, the district court made a specific finding of intent to deceive (App. 90a) and a specific finding that “negligence played no role” in Aventis’ and Dr. Uzan’s

misrepresentations and omissions (App. 89a). The Federal Circuit affirmed that the evidence supported those findings. App. 30a.

The express holdings of the district court and Federal Circuit show that neither applied a "sliding scale" that allowed an inference of intent to deceive solely from materiality as Aventis contends. Instead, both courts recognized that intent to deceive must be found separate from materiality. *See* App. 49a (citing *GFI*, 265 F.3d at 1274; *Manville*, 917 F.2d at 552).

That is not to say, however, that a high level of materiality is irrelevant to a party's intent to deceive. Parties rarely confess an intent to deceive. Thus, intent ordinarily must be proven by circumstantial evidence. The degree of materiality naturally affects whether it is appropriate to draw an inference of an intent to deceive: it is easy to forget about relatively inconsequential facts, but much less likely that a person will have innocently overlooked highly consequential facts. Rather than applying a "sliding scale" that eliminates the need to prove intent to deceive, the district court correctly observed "[t]he quantum of proof required to show intent is tied to materiality" App. 49a. The district court carefully noted at the same time that "[a]lthough 'a lesser quantum of proof is needed to establish the requisite intent' . . . Amphastar and Teva must still prove the predicate facts by clear and convincing evidence."¹²

¹² At page 8:22-31 of its petition, Aventis mischaracterizes the Federal Circuit's decision by contending that the Federal
(Cont'd)

Thus, the district court was addressing the amount of evidence necessary for Amphastar and Teva to meet their burden, and expressly not dispensing with the need to prove an intent to deceive. *Id.*

Indeed, this court has recognized in other contexts that the reason or motive for a deception (and thus its materiality) cannot be divorced from the intent to deceive. *See, e.g., Claflin v. Commonwealth Ins. Co.*, 110 U.S. 81, 95 (1884):

[I]f [statements upon a material matter] are knowingly false and willfully made, the fact that they are material is proof of an attempted fraud, because their materiality, in the eye of the law, consists in their tendency to influence the conduct of the party who has an interest in them, and to whom they are addressed.

The Court has also recognized that "intent may be shown by any evidence that has a tendency to persuade the mind of its existence. Hence, in actions for fraud, large latitude is always given to the admission of evidence." *Butler v. Watkins*, 80 U.S. 456, 464 (1872).

(Cont'd)

Circuit placed the burden on Aventis to prove by clear and convincing evidence that Example 6 was not meant to address compositional difference. Contrary to Aventis' argument the Federal Circuit was merely finding that there was no clear error in the district court's finding. App. 23a ("We cannot agree that the district court clearly erred in its determination that the half-life comparisons were, at least in part, intended to show compositional differences.").

II. THE DISTRICT COURT DID NOT CLEARLY ERR IN FINDING AN ABSENCE OF NEGLIGENCE

The district court also took great pains to make it clear that the misleading use of a different dose half-life study in Example 6, coupled with the affirmative misrepresentations during the prosecution that there was a significant difference in half-life, and the omission of the fact that a different dose comparison was being made and the actual dose used for the E.P. 40,144 study, was intentional and not due to negligence. App. 87a-89a. The district court found Aventis' and Dr. Uzan's explanation unsupported and contradicted by other contemporaneous evidence, in addition to being uncorroborated and an apparent after-the-fact fabrication. App. 73a-78a, 88a-89a. The district court specifically found that the explanation suffered from a total absence of credibility. *Id.* In reaching its decision the district court considered the totality of the evidence and rejected Aventis' evidence of alleged good faith as not credible. *Id.*

In spite of the district court's express findings of fact and credibility determinations, Aventis seeks review of the district court's decision contending that the district court found exactly what it expressly ruled out. Aventis' argument necessarily requires that this Court improperly accept Dr. Uzan's discredited "clinically relevant dose" testimony as an established fact. The district court's credibility determination was detailed and fully supported by the evidence. This Court has recognized that the credibility determinations of the trier of fact "can virtually never be clear error." *Anderson v. Bessemer City*, 470 U.S. 564, 575 (1985). In any event, "[a] petition for a writ of certiorari is rarely

granted when the asserted error consists of erroneous factual findings or the misapplication of a properly stated rule of law." S. Ct. R. 10.

III. THERE IS NO CONFLICT AMONG THE LOWER COURTS

Beyond the absence of a factual predicate for Aventis' petition, Aventis' characterization of the law is also incorrect. Aventis contends that there is a conflict among the lower courts regarding whether gross negligence is sufficient to establish inequitable conduct. Aventis cites "five regional circuits" that purportedly rejected the gross negligence standard and three other circuits that purportedly premised inequitable conduct on gross negligence. Pet. at 20. None of these cases are relevant in view of the Federal Circuit's exclusive jurisdiction over patent cases under 28 U.S.C. § 1295(a)(1). No circuit other than the Federal Circuit has addressed the inequitable conduct issue for over 25 years.

Aventis' further contends that there is a conflict within the Federal Circuit with some panels applying a gross negligence standard and others not. This Court has held that such internal circuit conflicts do not support the granting of a petition for certiorari. *Wisniewski v. United States*, 353 U.S. 901, 902 (1957) (refusing to grant certiorari on a question certified by a court of appeals to resolve an intra-circuit conflict):

Whatever procedure a Court of Appeals follows to resolve these problems-and desirable judicial administration commends consistency at least in the more or less

contemporaneous decisions of different panels of a Court of Appeals-doubt about the respect to be accorded to a previous decision of a different panel should not be the occasion for invoking so exceptional a jurisdiction of this Court as that on certification. It is primarily the task of a Court of Appeals to reconcile its internal difficulties.

See also Davis v. United States, 417 U.S. 333, 340 (1974). Notably, although Aventis petitioned for the Federal Circuit to revisit this case en banc, the Federal Circuit unanimously agreed that this case was not an appropriate vehicle. Notably, even dissenting Judge Rader did not vote for rehearing, apparently recognizing that his disagreement with the majority turned primarily on his reading of the factual record.

In any event, Aventis' argument is based upon a misreading of Federal Circuit law. The law in the Federal Circuit has been settled since *Kingsdown Medical Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) (en banc). But *Kingsdown* did not hold that gross negligence was irrelevant to an intent to deceive in all cases, as Aventis apparently contends. Rather, the Federal Circuit held that gross negligence *alone* is insufficient for a finding of inequitable conduct and that the totality of the circumstances must be considered:

We adopt the view that a finding that particular conduct amounts to "gross negligence" does **not of itself** justify an inference of intent to deceive; the involved

conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.

Id. at 876 (emphasis added). Thus, the Federal Circuit merely held that gross negligence **alone** was not sufficient for a finding of inequitable conduct but rather that the totality of the circumstances must be considered.

Aventis' argument stems from the Federal Circuit's rule that intent to deceive can be inferred where the patentee "knew or should have known of the materiality" of the misrepresentation or omission. Aventis contends that this does away with the requirement to prove deceptive intent. Aventis is wrong.¹³ "Should have known" comes into play only with respect to knowledge of the materiality of the known misrepresentation, and is entirely appropriate circumstantial evidence of an intent to deceive. In any event, the district court in this case specifically found that Dr. Uzan knew (and not merely should have known) of the materiality of his

¹³ The Federal Circuit has also held that *after* a trial court finds the two requisite thresholds of an intent to deceive and materiality of the misrepresentation, the trial court may balance the degree of materiality with intent in deciding whether the proper remedy is to declare the patent unenforceable. App. 90a. Thus the Federal Circuit gives patentees an extra chance to avoid unenforceability. If anything, this doctrine confirms that Aventis is flat wrong in suggesting that the Federal Circuit applies a rigid rule of "automatic unenforceability."

misrepresentations and omissions, rendering this case a poor vehicle to address the issue. App. 81a.¹⁴

Aventis focuses only on one aspect of the intent inquiry and therefore misses the larger picture entirely. The Federal Circuit has not ruled out the consideration of evidence that the patentee should have known of the materiality or even gross negligence. Rather, that the patentee should have known of materiality or was grossly negligent in avoiding any knowledge of materiality can be considered in the context of other circumstantial evidence from which an intent to deceive can be inferred. As explained in *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*:

Although the proof of gross negligence may be circumstantial evidence which gives rise to an inference of intent to mislead in some instances, the label "gross negligence" covers too wide a range of culpable conduct to create such an inference in all cases. Thus, grossly negligent conduct may or may not compel an inference of an intent to mislead. Such an inference depends

¹⁴ The district court also found in the alternative that Dr. Uzan "must (and should) have known what experimental question he was answering" App. 82a. This was not a determination of negligence, but rather an application of circumstantial evidence to find intent. The district court found under the circumstances that any claim by Aventis and Dr. Uzan that he did not know the materiality of the representations he made to the Patent Office in his prosecution declarations was not credible. App. 82a ("After all, Aventis can scarcely disagree that Dr. Uzan ought to have been aware of the nature of the questions he was called on to answer before the PTO."). Based upon the totality of the circumstances a finding of intent to deceive was appropriate regardless of whether Aventis admitted Dr. Uzan knew the materiality of his misrepresentations or contended that he did not.

upon the totality of the circumstances, including the nature and level of culpability of the conduct and the absence or presence of affirmative evidence of good faith.

882 F.2d 1556, 1562 (Fed. Cir. 1989) (citing *Kingsdown*, 863 F.2d at 876); see *Manville*, 917 F.2d at 552 (affirming a finding of no inequitable conduct explaining: "As we noted in *Hewlett-Packard* . . . 'grossly negligent conduct may or may not compel an inference of an intent to mislead.' Here it did not.") (citation omitted).

In short, there is no conflict in the Federal Circuit, or between the circuits. Rather, the outcome of each case, including those cited by Aventis, depended on the particular circumstantial evidence present in each respective case and whether an inference of an intent to deceive was proper in view of the totality of the evidence.¹⁵

¹⁵ For example, Aventis cites the dissenting opinions from two post-*Kingsdown* decisions in *Ferring B.V. v. Barr Labs., Inc.*, 437 F.3d 1181, 1191, 1196 (2006) (Newman, J., dissenting); *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1329 (Fed. Cir. 2008) (Lourie, J., dissenting). The majority in *Ferring* did not rely solely on what the patent prosecutor "should have known." Rather, the majority affirmed the district court's finding of inequitable conduct based upon the patentee's knowledge of the past relationships of the two declarants, the undisputed fact that the patentee knew the materiality of the information (i.e. the examiners concern about the identity of the affiants); the fact that the examiner had specifically requested "non-inventor" affidavits, and the absence of any evidence of good faith. *Ferring*, 437 F.3d at 1191-92. In *Praxair*, the majority found that the patentee knew about the prior art reference in addition to having known or should have known of its materiality along with high materiality. 543 F.3d at 1318. The dissents merely disagree as to whether the facts supported an inference of intent to deceive.

The same is true in this case. Judge Rader disagreed with the majority and the district court, however, he did not consider the totality of the circumstances and improperly substituted his view of the evidence for that of the district court.¹⁶ That is not, however, the role of the appellate court. See *Anderson v. Bessemer City*, 470 U.S. 564, 574 (1985) (“[I]f the district court’s account of the evidence is plausible in light of the record viewed in its entirety the court of appeals may not reverse it even though convinced that had it been sitting as the trier of fact, it would have weighed the evidence differently.”); *Kingsdown*, 863 F.2d at 872 (“This standard plainly does not entitle a reviewing court to reverse the finding of the trier of fact simply because it is convinced that it would have decided the case differently.”).

The “should have known” rule addresses attempts to avoid a finding of deceptive intent through “studied

¹⁶ Judge Rader made several factual mistakes in his dissent including the timing of the reissue (*compare* App. 38a with App. 12a n.6), his assumption that Dr. Uzan allegedly revealed the error in the different dose study (*Compare* App. 37a with App. 84a, 100a-105a (Rader joining in majority)), and his assertion that Example 6 makes the different dose comparison apparent (*id.*). Judge Rader also failed to take into account the use of “4.5 hours” for both the subparagraph (1) and (3) studies and the statement in Example 6 that the study was “under identical dosage conditions.” App. 43a-44a-n.3. Judge Rader further found that a different dose comparison was scientifically reasonable without any support whatsoever. App. 36a. Judge Rader also improperly weighed Dr. Uzan’s credibility, finding that Dr. Uzan was free of deceptive intent because of his caliber and reputation as a scientist. App. 36a. Judge Rader effectively substituted his judgment on facts he deemed important and his credibility determinations of a witness he did not observe testify for the district court’s. *Anderson*, 470 U.S. 574.

ignorance.” *Hewlett-Packard*, 882 F.2d at 1562. Thus, cases such as *Bressler, U.S.A.I., L.P. v. Styker Sales Corp.*, 267 F.3d 1370, 1384 (Fed. Cir. 2001) and *FMC Corp. v. Hennessy Industries, Inc.*, 836 F.2d 521, 526 n.6 (Fed. Cir. 1987) criticized by *Aventis* involved “studied ignorance” as part of the circumstantial evidence supporting an inference of an intent to deceive.

IV. THERE IS NO CONFLICT BETWEEN THE FEDERAL CIRCUIT’S APPROACH AND THIS COURTS PRECEDENTS

As noted above, this Court has held that “large latitude is always given to the admission of evidence” to establish an intent to deceive. *Butler v. Watkins*, 80 U.S. 456, 464 (1872). In particular, this Court has held that evidence of gross negligence can be taken into account when finding an intent to deceive. For example, as early as 1895, this Court recognized that a person could be held criminally liable for an evil intent where “his negligence in failing to inform himself [was] so gross as to characterize his conduct as fraudulent.” *Cochran v. United States*, 157 U.S. 286, 294 (1895); see also *United States v. Yermian*, 468 U.S. 63, 75 n.14 (1984) (holding that the defendant’s knowledge that the statement was false coupled with the fact that the defendant should have known the statement was being made to the government was sufficient to preclude “the possibility that criminal penalties were imposed on the basis of innocent conduct.”). Further, as Justice Souter recognized “deliberate indifference is thus treated, as it is elsewhere in the law, as tantamount to intent.” *Board of County Comm’rs v. Brown*, 520 U.S. 397, 419 n.1 (1997) (dissent) (“To consciously ignore or to deliberately close one’s eyes to a manifest danger is recklessness, a mental

state that the law commonly substitutes for intent or actual knowledge.”)

In the same manner, a patentee’s false representation to the Patent Office, actual knowledge of that falsity, coupled with a finding that under the circumstances the patentee knew or should have known (i.e. studied ignorance) of the materiality of the false representation and a finding that the patentee’s innocent explanations for its misconduct are incredible, are sufficient circumstantial evidence to support a finding of intent to deceive. Thus, the Federal Circuit’s decisions are completely consistent with the past rulings of this Court and basic principles of fraud.

Since the district court found that Dr. Uzan knew the materiality of his misrepresentations and omissions as evidenced by his prosecution declarations, the district court’s inference of intent to deceive were fully supported by what Dr. Uzan knew, not just what he should have known. Thus, the above debate will have no impact on the ultimate merits or outcome in this case.

**V. THERE IS NO SOUND REASON TO OVERTURN
THIS COURT’S LONG STANDING EQUITABLE
RULE REGARDING PATENTS OBTAINED BY
INEQUITABLE CONDUCT**

Ultimately, Aventis seeks to confine the type of circumstantial evidence that a court can consider in determining an intent to deceive. Yet this Court has long recognized that a person accused of fraud or deception is not likely to admit having an intent to deceive. Thus, as this Court has held, “[c]ircumstantial evidence is not only sufficient, but may also be more certain, satisfying

and persuasive than direct evidence.” *Michalic v. Cleveland Tankers, Inc.*, 364 U.S. 325, 330 (1960). If a person accused of fraud is not likely to admit having a deceptive intent, it is just as probable that such a person will not admit to knowing that the other person was actually deceived (i.e. knowing of the materiality of the misrepresentation.) If circumstantial evidence is necessary, and indeed “more certain, satisfying and persuasive” to prove the former, it is just as probative of the latter.

Lost in Aventis’ arguments is the purpose behind the inequitable conduct doctrine.¹⁷ The inequitable

¹⁷ Aventis warns of the coming “plague” of inequitable conduct cases as if use of the word alone could compel a result in its favor. The “plague” that the Federal Circuit addressed in *Burlington Indus. Inc. v. Dayco Corp.* was over the practice of alleging inequitable conduct simply as a matter of course. 849 F.2d 1418, 1422 (Fed. Cir. 1988). There is no evidence of that practice recurring. Further, the data from the University of Houston Law Center do not support Aventis’ argument. Since 2000, patentees have defeated inequitable conduct allegations over 75% of the time, and only 20 patents per year have been found unenforceable. Even the latter number is inflated by one unusual 2007 case in which 15 patents were held unenforceable due to a pattern of similar misconduct.

This case is certainly no evidence of a returning “plague.” Neither Amphastar nor Teva alleged inequitable conduct until discovery produced clear evidence of Aventis’ knowing misrepresentations to the PTO regarding the half-life data. And every judge to review the facts (including Judge Rader in the first appeal) has concluded that an intent to deceive could properly be inferred. App. 108a. That may not always be the case, but the harm to the public caused by a few ill-advised allegations of inequitable conduct is insignificant in comparison to the harm that would be caused by allowing patentees to knowingly submit false data to the Patent Office.

conduct doctrine stems from this Court's judgment that the doctrine is essential to the duty of candor patent applicants owe the Patent Office. *Precision Instrument*, 324 U.S. at 816. That duty arises from the constitutional mandate that patents be granted only to true inventions and only for a limited period of time. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 6 (1966). When a patent is wrongfully issued through inequitable conduct the "injury to the public through a weakening of the Patent System is manifest." *Norton v. Curtiss*, 433 F.2d 779, 796 (C.C.P.A. 1970). An improperly issued patent not only injures the Patent System but potentially costs the public millions of dollars (if not billions as in this case) in increased pricing resulting from an improperly patent-backed monopoly.¹⁸ The PTO cannot possibly know every material fact regarding patentability (i.e. offers for sale, public uses, prior art publications, etc.) and thus, must necessarily rely on the good faith and candor of patent applications.

The misrepresentations in this case struck at the point where the PTO is most susceptible to fraud. The misrepresentation present here related to experimental data used to distinguish the prior art in order to

¹⁸ Aventis goes outside the record pointing out that the patent in this case related to a drug in which Aventis has had sales in the "billions" of dollars over the life of the '618 patent. If Aventis is permitted to go outside the record, Aventis should also be required to acknowledge that (according to publicly available information) Aventis charges **five times** the amount for the drug at issue in the United States as Aventis charges in Europe. There could not be a more dramatic real world illustration of how a fraudulent obtained patent harms the public.

overcome the Examiner's rejections. The experimental data purported to establish superior properties and thus a novel composition. The Examiner twice advised Aventis that the PTO does not have the facilities or capabilities to conduct testing on its own. App. 7a n.2, 21a. As such the PTO must rely on an applicant's representations regarding experimental results. To carve out an exception to the inequitable conduct doctrine based upon the claim that the patentee (while knowing the falsity of the representations) did not know that the experimental data would have been relied upon by the Examiner (i.e. did not know it was material) would sanction "studied ignorance," and cripple the PTO where it is most vulnerable.

CONCLUSION

This is not a case of simple or even gross negligence. Rather, the overwhelming evidence established that Aventis and Dr. Uzan knowingly "cherry-picked" data to falsely create the appearance of a half-life difference between the LMWH from the '618 patent and the E.P. '144 patent. Aventis and Dr. Uzan then misrepresented the data while omitting key facts that would have shown the misrepresentations to be false.

At trial, Aventis offered an incredible, uncorroborated, after-the-fact fabricated story that was disproved on every level, which, according to the district court, "suffered from a total absence of credibility." App. 78a, 88a. Aventis would have this Court accept rejected testimony as established fact, ignore the express holdings of the lower courts, and adopt arguments raised for the first time in a petition for certiorari. This Court should decline the invitation and deny the petition.

Dated: March 27, 2009

Respectfully submitted,

JAN P. WEIR
STRADLING YOCOA CARLSON & RAUTH
660 Newport Center Drive
Suite 1600
Newport Beach, CA 92660
(949) 725-4000

*Counsel for Respondent
Amphastar Pharmaceuticals, Inc.*

124

5

No. 08-937

FILED

MAR 27 2009

OFFICE OF THE CLERK
SUPREME COURT U.S.

IN THE
Supreme Court of the United States

AVENTIS PHARMA S.A. AND
AVENTIS PHARMACEUTICALS INC.,
Petitioners,

v.

AMPHASTAR PHARMACEUTICALS, INC., AND
TEVA PHARMACEUTICALS USA, INC.,
Respondents.

On Petition for a Writ of Certiorari to the
United States Court of Appeals
for the Federal Circuit

**BRIEF IN OPPOSITION OF RESPONDENT
TEVA PHARMACEUTICALS USA, INC.**

FRANCIS C. LYNCH
Counsel of Record
HENRY C. DINGER
LAURIE S. GILL
ROBERT D. CARROLL
GOODWIN PROCTER LLP
Exchange Place
53 State Street
Boston, Mass. 02109
(617) 570-1000
*Attorneys for Respondent
Teva Pharmaceuticals
USA, Inc.*

March 27, 2009

OBJECTION TO QUESTION PRESENTED

The question that Petitioner purports to present is not at issue in this case. As discussed below, the district court did not base its finding of intent to deceive on gross negligence. Instead, the district court made careful credibility findings after considering all the facts and circumstances and concluded that there was "clear and convincing evidence that Dr. Uzan intended to deceive the [Patent Office]." App. 90a.

The Federal Circuit, applying the well established law that both materiality and intent must be proven by clear and convincing evidence and that intent to deceive cannot be presumed from high materiality, affirmed. Petitioner did not argue on appeal that the district court improperly applied a sliding scale to allow intent to be based on gross negligence and the Federal Circuit did not endorse such a standard.

**RESPONDENT TEVA'S RULE 29.6
STATEMENT**

Pursuant to this Court's Rule 29.6, counsel for respondent Teva Pharmaceuticals USA, Inc. certifies that the parent companies of respondent Teva Pharmaceuticals USA, Inc. are Orvet UK, Teva Pharmaceuticals Europe B.V. (Holland) and Teva Pharmaceutical Industries Ltd. (Israel). All corporations that own 10 percent or more of respondent Teva Pharmaceuticals USA, Inc. are: Teva Pharmaceutical Industries, Ltd.

TABLE OF CONTENTS

	Page
COUNTERSTATEMENT OF THE CASE	1
REASONS FOR DENYING THE PETITION.....	9
I. The Standards for Proving the Intent To Deceive Element of Inequitable Conduct Established by the Federal Circuit Were Properly Applied in This Case	9
A. Neither the Federal Circuit Nor the District Court Allowed Gross Negligence To Satisfy the Intent Element of Inequitable Conduct, Although They Properly Based a Finding of Actual Intent on Circumstantial Evidence, As Is Common When Determining Intent in Other Areas.....	9
B. The Inequitable Conduct Standard Applied in this Case Is Consistent with This Court's Decisions on Inequitable Conduct and on the Doctrine of Unclean Hands.....	17
C. There is No "Circuit Split" or "Split" in Federal Circuit Authority With Respect to What Is Required to Prove the Intent Element of Inequitable Conduct.....	20

II. The Question on which Petitioner Seeks Review Is Not Presented by this Case Nor Was It Raised Below	22
A. Neither the District Court Nor the Federal Circuit Improperly Conflated Materiality and Intent So As To Allow Inequitable Conduct To Be Proven Merely by Gross Negligence	22
B. The Legal Question Petitioner Seeks To Present Was Not Raised Below.	23
III. The Inequitable Conduct Defense Is Crucial to Ensuring the Integrity of Our Ex Parte Patent Prosecution System	24
A. The Inequitable Conduct Defense Is the Only Effective Method of Enforcing the Duty of Candor Owed to the Patent Office	25
B. There is No "Plague" Resulting from the Inequitable Conduct Defense	30
CONCLUSION	34

TABLE OF AUTHORITIES

CASES

<i>Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.</i> , 267 F.3d 1370, 1384 (Fed. Cir. 2001)	11
<i>Cargill, Inc. v. Canbra Foods, Ltd.</i> , 476 F.3d 1359 (Fed. Cir. 2007)	27
<i>Central Admixture Pharm. Servs., Inc. v.</i> <i>Advanced Cardiac Solutions, P.C.</i> , 482 F.3d 1347 (Fed. Cir. 2007)	32
<i>Duignan v. United States</i> , 274 U.S. 195, 200 (1927)	23
<i>Ernst & Ernst v. Hochfelder</i> , 425 U.S. 185 (1976)	14
<i>eSpeed, Inc. v. BrokerTec USA, L.L.C.</i> , 480 F.3d 1129 (Fed. Cir. 2007)	33
<i>Ferring B.V. v. Barr Labs., Inc.</i> , 437 F.3d 1181 (Fed. Cir. 2006)	21
<i>GFI, Inc., v. Franklin Corp.</i> , 265 F.3d 1268, 1274 (Fed. Cir. 2001)	21
<i>Hazel-Atlas Glass Co. v. Hartford-Empire Co.</i> , 322 U.S. 238 (1944)	17, 18, 23

<i>Herman & MacLean v. Huddleston</i> , 459 U.S. 375 (1983).....	10
<i>Impax Labs., Inc. v. Aventis Pharms. Inc.</i> , 468 F.3d 1366 (Fed. Cir. 2006)	9, 16
<i>In re Dillon</i> , 919 F.2d 688 (Fed. Cir. 1990)	26
<i>Ingersoll Milling Mach. Co. v. Gen. Motors Corp.</i> , 110 F. Supp. 12 (N.D. Ill. 1952).....	29
<i>Keystone Driller Co. v. General Excavator Co.</i> , 290 U.S. 240 (1933).....	17, 18, 23
<i>Kingsdown Medical Consultants, Ltd. v. Hollister Inc.</i> , 863 F.2d 867 (Fed. Cir. 1988)	9, 10, 20, 21, 23
<i>Larson Mfg. Co. of S. D., Inc. v. Aluminart Prods. Ltd.</i> , Nos. 2008-1096, 2008-1174, 2009 WL 691322 (Fed. Cir. Mar. 18, 2009).....	24
<i>Nilssen v. Osram Sylvania, Inc.</i> , 440 F. Supp. 2d 884 (N.D. Ill. 2006).....	29
<i>Praxair, Inc. v. ATMI, Inc.</i> , 543 F.3d 1306 (Fed. Cir. 2008)	21
<i>Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co.</i> , 324 U.S. 806 (1945).....	17, 18, 19, 20, 23

<i>Rea v. Missouri</i> , 84 U.S. 532 (1873).....	11
<i>Seven Cases v. United States</i> , 239 U.S. 510 (1916).....	10
<i>United States v. Pennington</i> , 168 F.3d 1060 (8th Cir. 1999).....	17
<i>United States v. Peters</i> , 462 F.3d 953 (8th Cir. 2006).....	16
<i>United States v. Williams</i> , 504 U.S. 36 (1992).....	23

STATUTES

21 U.S.C. § 355(j)(5)(B)(iii).....	27
35 U.S.C. §§ 101-103	25
35 U.S.C. § 102(b).....	26
35 U.S.C. § 282	28, 33
66 Stat. 792, 812 (July 19, 1952)	28
Act of Apr. 10, 1790, ch. 7, § 5, 1 Stat. 109, 111 (1790).....	28
Patent Act of 1836, ch. 357, §§ 1, 5-7, 15, 5 Stat. 117, 117-20, 123 (1836).....	28

Patent Act of 1870, ch. 230, § 61, 16 Stat. 198, 208 (1870)	28
--	----

OTHER AUTHORITIES

Fed. R. Civ. P. 9(b)	32, 33
----------------------------	--------

Fed. R. Civ. P. 11	32, 33
--------------------------	--------

Henry Grabowski, <i>Competition between Generic and Branded Drugs, in PHARMACEUTICAL INNOVATION: INCENTIVES, COMPETITION AND COST-BENEFIT ANALYSIS IN INTERNATIONAL PERSPECTIVE</i> 153, 160 (Frank A. Sloan & Chee-Ruey Hsieh, eds., 2007)	27
---	----

http://www.cafc.uscourts.gov/statistics.html (Caseload by Category, Table of Data to accompany pie charts) (last visited Mar. 23, 2009)	30
---	----

http://www.patstats.org/2006.htm (last visited Mar. 24, 2009)	31
---	----

http://patstats.org/2007%20full%20year.htm (last visited Mar. 24, 2009)	31
---	----

http://www.patstats.org/Cumulative Caselist through 3Q08.xls (last visited Mar. 24, 2009)	31
---	----

Doug Litchman & Mark A. Lemley, <i>Rethinking Patent Law's Presumption of Validity</i> , 60 STAN. L. REV. 45, 46 (2007).....	25
Notice of Rule-Making, May 19, 1982, 47 Fed. Reg. 21746 (May 19, 1982) (reprinted in 37 C.F.R. § 1.56 (1982))	29
<i>Patent and Trademark Office Implementation of 37 C.F.R. § 1.56</i> , 1095 OFF. GAZ. PAT. OFFICE 16 (Oct. 11, 1988)	29
Patent Office Professional Association, Congressional White Paper, The Patent Reform Act Will Hurt, Not Help, the U.S. Patent System (Aug. 2007)	32
Statement of Robert D. Budens, President, Patent Office Professional Association, to House Judiciary Committee's Subcommittee on Courts, the Internet and Intellectual Property (Feb. 27, 2008)	26
U.S. Patent & Trademark Office, 2007-2012 Strategic Plan (2007)	26
U.S. Patent & Trademark Office, Performance and Accountability Report, FY 2007 (2007).....	26

Respondent Teva Pharmaceuticals USA, Inc. ("Teva") respectfully requests that this Court deny the petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

COUNTERSTATEMENT OF THE CASE

Petitioner asks this Court to review an appellate judgment that the district court did not clearly err in finding that the evidence at trial clearly and convincingly established that Petitioner concealed information highly material to patentability with intent to deceive the patent examiner. Petitioner invokes selected bits of evidence in support of its position, but ignores the full factual record considered by the district court and the adverse credibility findings made concerning the testimony of Petitioner's primary witness, Dr. Uzan. As the Federal Circuit recognized, the evidence as a whole provided ample support for the district court's finding of intent.

Since this Court does not ordinarily grant certiorari to consider whether a circuit court properly reviewed a district court's factual findings, Petitioner attempts to reframe this issue as one of law. Specifically, Petitioner says that the district court inferred intent to deceive the Patent Office from what was at worst gross negligence and that by affirming that decision, the Federal Circuit endorsed a standard that allows inequitable conduct to be established without actual proof of deceptive intent. To the contrary, both the district court and the Federal Circuit expressly recognized that actual proof of intent was required, and concluded that the circumstantial evidence presented warranted an inference of intent.

Facts Found by the District Court

The patent claims at issue are directed to a chemical composition comprising low molecular weight heparins ("LMWHs"). Heparin is a naturally-occurring anticoagulant material consisting of long polysaccharide chains. App. 41a. LMWHs are derived from natural heparin in a process that results in smaller chains. *Id.* The claims encompass mixtures of polysaccharide chains with specified size distributions. App. 3a.

Aventis developed enoxaparin, a LMWH that was approved and marketed successfully beginning in 1987 in Europe. App. 41a. Enoxaparin was covered by European Patent No. 40,144 ("EP '144"), but that patent was revoked in 1990 for lack of novelty, and Aventis was forced to abandon its U.S. counterpart application. App. 41a-42a. Aventis nevertheless sought FDA approval for use of enoxaparin in the U.S. and, as a result, faced what the district court found was "substantial pressure" to obtain U.S. patent protection for enoxaparin. App. 42a.

Accordingly, Aventis filed a patent application for what it said was a "new" formulation of enoxaparin. The critical issue in the prosecution of this application was whether the "new" formulation of enoxaparin was in fact patentably different from the formulation covered by the prior art EP '144 patent. App. 43a. The examiner repeatedly rejected claims to the "new" formulation, questioning whether it was different at all from EP '144 and, even if it were not the same, whether it was nonetheless obvious. App. 4a-10a.

One of the ways Aventis attempted to distinguish its "new" LMWH from the prior art EP '144 product was by focusing on "half-life," i.e., the time in which the compound loses half of its therapeutic effect after administration. App. 43a. The problem Aventis faced, however, was that its internal half-life data showed there was, in fact, very little difference between the "old" and "new" LMWHs. Of the four doses of the claimed LMWH for which Aventis had measured half-life (20, 40, 60 and 80 mg), *"[o]nly the 40 mg dose showed a statistically significant difference over [the half life of the 60 mg dose of the prior art product]."* App. 73a-74a. The specification compared the half-life of only the 40 mg dose of the claimed invention to the 60 mg dose of the prior art product, without disclosing that Aventis possessed other data showing no difference. Indeed, Aventis did not even inform the examiner that it was comparing the two compounds at different dosages.

The district court found that the decision to disclose the favorable data while concealing the unfavorable data

"gives rise to the natural inference that Aventis sought to achieve by hindsight the appearance of a statistically significant difference where none actually existed; that Aventis and Dr. Uzan engaged in a post-hoc analysis of *** data, 'cherry-picked' the one dose permitting a favorable comparison to [the prior art], and developed in retrospect an analytical framework within which the use of this dose could be rationalized." App. 74a.

The misleading comparison was not "confined to three isolated instances," as Aventis asserts. The undisclosed different dose half-life comparison was

presented first in the specification, then used to argue for patentability in response to the patent examiner's rejection of the claims, and further repeated and expanded in two separate declarations filed by Dr. Uzan in a further effort to overcome the examiner's repeated rejections.

In response to the examiner's first rejection, Aventis referred to the half-life data and argued that because "the inventive formulations and those of the [prior art] European patent exhibit different properties, such as half life, it *necessarily follows that the formulations of the invention could not possibly be the same as those of the European patent.*" App. 57a. Aventis could not have made this argument had it disclosed the difference in dosages. The examiner maintained the rejections in the next office action, noting that Aventis had to "convincingly demonstrate that the claimed product provides some unexpected or unobvious property not demonstrated by the prior art." App. 58a.

In response, Aventis submitted the Dr. Uzan's First Declaration in which Dr. Uzan misleadingly characterized the half-life data in the specification as showing that the claimed formulations had a 250% increase in half-life over the product of the European patent. App. 59a. The examiner noted the first Uzan declaration but maintained the rejection, stating that Aventis had "failed to provide evidence that the alleged difference between the half life of the [European patent] product and that of the instant mixture is statistically significant." App. 60a.

In response to this continued rejection, Aventis filed Dr. Uzan's Second Declaration, which finally revealed the mean half-life and standard deviation

for the 40 mg dose of the claimed invention and compared it to the mean half-life and standard deviation of the prior art product, although the dose of the prior art product remained concealed. App. 45a. Because the dose of the prior art product was never revealed, the examiner did not know that different doses were being compared or that a same dose comparison would show no statistically significant difference in mean half-life. *Id.*

As part of its consideration of the facts and circumstances surrounding this misleading half-life comparison, the district court found that Petitioner's explanations for not disclosing that the half-life comparison was made at different doses changed repeatedly over the course of the litigation and that none of the proffered explanations were credible. These excuses included: (i) an assertion by Dr. Uzan that he thought that he had disclosed the different dosages, (ii) an argument that he used different doses because they were the clinically relevant doses of the products being compared, (iii) an assertion that a different dose comparison was reasonable because the half-lives were dose-independent and (iv) a claim that the failure to disclose that different doses were being compared was inadvertent.

The excuse that Dr. Uzan thought he had disclosed in the specification that different doses were used in the half-life comparison was rejected as unreasonable by the Federal Circuit on the first appeal in this case. App. 102a-103a. The second Federal Circuit panel found that the district court did not clearly err in finding that this excuse did not outweigh the cumulative evidence evincing an intent to deceive. App. 29a.

The district court found none of the remaining excuses credible. In particular, it found the claim that Dr. Uzan compared the claimed invention to the prior art at the "clinically relevant doses" to be a rationalization because "there were a variety of preferred therapeutic doses at the time, depending on the indication." App. 77a. The district court, after finding that Petitioner intended the half-life comparison to address both the anticipation and obviousness rejections issued by the patent examiner, found that a different dose comparison could not show that the two compositions were different, relying on testimony from both the inventor of the patent-in-suit and Petitioner's trial expert. App. 58a, 66a-67a. Based on this evidence, the district court found that Dr. Uzan's "clinically relevant dose" excuse was "unreasonable, because [his] experimental design is unconnected to and inconsistent with his true experimental purpose." App. 67a.

The district court also rejected Petitioner's assertion that a different dose comparison was reasonable here because half-lives are dose independent, finding that the data available to Dr. Uzan did not support such a conclusion. App. 68a-69a.

The district court further found it implausible that Dr. Uzan, a respected scientist, had inadvertently presented the data in the misleading manner that they appeared in the patent and his two declarations. Specifically the district court found that "[i]t strains credulity to suggest that a scientist of Dr. Uzan's skills and experience could have relied on logic so flawed purely by accident." App. 83a. In fact, the district court concluded that "Dr. Uzan's

explanation suffers from a total absence of indicia of credibility." App. 88a.

The district court concluded that "[n]egligence played no role in Aventis and Dr. Uzan's failure to disclose the [prior art] dose information." App. 89a. The district court further concluded that Petitioner's repeated failure over the course of the prosecution to disclose to the PTO any information concerning the circumstances of the half-life comparison, which had the effect of concealing the "experimental design mistakes that Dr. Uzan's training, skills and experience strongly suggest he could have never accidentally made," was strong circumstantial evidence of intent to deceive. App. 86a, 90a.

The district court accordingly concluded that this case involved "a statistical analysis designed post-hoc and rationalized in hindsight to fit a hoped-for result" and that there was "clear and convincing evidence that Dr. Uzan intended to deceive the PTO." App. 90a.

Legal Basis For Decisions Below

Contrary to Petitioner's assertion (Pet. at 8), neither the Federal Circuit nor the district court presumed fraudulent intent from materiality. The district court went out of its way to "separately [find] that clear and convincing evidence adduced at trial independently reestablishes—and substantially strengthens—those earlier inferences of intent." App. 87a. Furthermore the district court expressly recognized the controlling Federal Circuit law that materiality alone does not justify a presumption of an intent to deceive. App. 49a. The district court plainly understood that even gross negligence was not sufficient to establish intent to deceive (App. 79a)

and made explicit its finding that “[n]egligence played no role in Aventis and Dr. Uzan’s failure to disclose the [prior art] dose information.” App. 89a. The district court did not base its intent finding merely on the high materiality of the misleading half-life disclosure, but found intent to deceive “based on the totality of the facts and circumstances surrounding Dr. Uzan’s repeated omissions.” App. 90a.

The Federal Circuit considered the arguments Petitioner advanced to challenge the district court’s finding of intent to deceive and found no clear error. Nothing in the Federal Circuit’s decision even suggests that intent may be presumed merely from high materiality or because of gross negligence. To the contrary, the Federal Circuit recognized that “the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.” App. 18a. Only in connection with the final step of balancing the equities, after materiality and intent had already been found, did the Federal Circuit refer to higher materiality allowing a lesser showing of intent. *Id.*

No member of the Federal Circuit dissented from the denial of Petitioner’s petition for rehearing *en banc*, not even the judge who dissented from the panel decision. App. 93a.

REASONS FOR DENYING THE PETITION

I. The Standards for Proving the Intent To Deceive Element of Inequitable Conduct Established by the Federal Circuit Were Properly Applied in This Case.

Petitioner asserts that the courts below applied too lenient a standard for establishing intent to deceive. Petitioner's attack misrepresents the standards actually applied by the Federal Circuit and mischaracterizes the nature of prior decisions involving inequitable conduct of both this Court and the Federal Circuit.

A. Neither the Federal Circuit Nor the District Court Allowed Gross Negligence To Satisfy the Intent Element of Inequitable Conduct, Although They Properly Based a Finding of Actual Intent on Circumstantial Evidence, As Is Common When Determining Intent in Other Areas.

The standard applied below for proving the defense of inequitable conduct is not, as Petitioner contends, "effectively a gross negligence standard." The Federal Circuit applied the standard for determining intent to deceive set forth in its *en banc* decision in *Kingsdown Medical Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867 (Fed. Cir. 1988), a standard that Petitioner does not challenge. In particular, the Federal Circuit stated that "[t]o satisfy the intent to deceive element of inequitable conduct, 'the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.'" App. 18a. (quoting *Impax Labs., Inc. v.*

Aventis Pharms. Inc., 468 F.3d 1366, 1374-75 (Fed. Cir. 2006) (quoting *Kingsdown*, 863 F.2d at 876)).

In *Kingsdown* the Federal Circuit explicitly held that gross negligence is insufficient to satisfy the intent element of inequitable conduct:

“[A] finding that particular conduct amounts to ‘gross negligence’ does not of itself justify an inference of intent to deceive; the involved conduct, viewed in light of all the evidence, including evidence of good faith, must indicate sufficient culpability to require a finding of intent to deceive.” 863 F. 2d at 876.

Although Petitioner concedes in passing that “the intentionality of certain conduct can be inferred from circumstantial evidence” (Pet. at 16 n.3), the thrust of its petition seeks a rule of law that would prevent inferences of deceptive intent from circumstantial evidence. Since it is well-established in decisions from this Court that such inferences are not only proper but often necessary, and since Petitioner offers no plausible reason to reject this law, the petition presents no question warranting certiorari review.

This Court has long acknowledged the sufficiency of and, indeed, the need to rely on circumstantial evidence in proving intent to deceive. For example, this Court has recognized “that the proof of scienter required in fraud cases is often a matter of inference from circumstantial evidence . . . [and] that *circumstantial evidence can be more than sufficient.*” *Herman & MacLean v. Huddleston*, 459 U.S. 375, 390 n.30 (1983) (emphasis added); see also, e.g., *Seven Cases v. United States*, 239 U.S. 510, 517 (1916) (holding that under food and drug forfeiture

statute, "actual intent to deceive . . . may be derived from the facts and circumstances"); *Rea v. Missouri*, 84 U.S. 532, 543 (1873) ("To establish fraud, it is not necessary to prove it by direct and positive evidence. *Circumstantial evidence is not only sufficient, but in most cases it is the only proof that can be adduced.*" (emphasis added)). The common thread running through these cases is the practical recognition that it is the exceedingly rare case in which an intentionally deceitful party will either admit his intent to deceive or produce direct "smoking gun" evidence of that intent. Therefore, proof of intent by circumstantial evidence is necessary and appropriate to prevent intentional wrongdoers from escaping liability for their deliberate misconduct.

Petitioner fails to acknowledge what it means for a fact finder to infer intent from circumstantial evidence. In a typical patent case, the "circumstances" that bear on whether the concealment of material information was made with intent to deceive (rather than innocently or merely negligently) include the following. First, the knowledge of the applicant is a highly relevant circumstance. If the applicant genuinely was unaware of the information, the concealment of the information cannot have been intentional.¹ There is no dispute here that Dr. Uzan knew that the half-life comparison Petitioner used to argue for patentability involved different doses.

¹ On the other hand, circumstances evidencing a "cultivate[d] ignorance" or willful disregard for suspicious facts can support an inference of intent. See *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1384 (Fed. Cir. 2001).

Second, the significance of the concealed information is plainly relevant. This is a matter of common sense. If the concealed information only marginally bears on the issue of patentability, then it is harder to infer deliberate concealment than it is where the applicant withholds information critical to determining patentability. Where, as here, the information known to the applicant goes directly to the patentability arguments advanced by the applicant, a suggestion that the concealment of the information was innocent or merely negligent is less likely to be credible. Here, the misleading half-life comparison was an important focus of Petitioner's efforts to overcome the examiner's rejection of the claimed formulation as not patentably distinct from the prior art. In the first appeal in this case, the Federal Circuit upheld the district court's summary determination that the undisclosed difference in dose was highly material and further found that the an inference of deceptive intent was reasonable. App. 105a, 108a. Even the dissenting judge on the second appeal joined in this earlier opinion.

The sophistication of the applicant is also germane to determining intent. It is more plausible to infer that the concealment of material information is innocent or merely negligent where the applicant might not have fully appreciated its scientific or legal significance. But where the person responsible for concealing the material information is highly sophisticated and fully appreciates the significance of the withheld information, it is easier to infer intent to deceive. Here, the district court expressly recognized that Dr. Uzan was, as Petitioner stresses, a very experienced and sophisticated scientist. App. 80a. He understood the difference in doses and its

scientific significance. He admitted that he knowingly presented this different dose comparison. App. 52a-53a. The district court also found that he was aware of the Patent Office's evolving objections throughout the prosecution and knew that the examiner was looking for proof of a statistically significant difference between the claimed invention and the prior art. App. 81a. This knowledge and sophistication properly is part of the circumstantial evidence indicative of an intent to deceive.²

In addition, the trier of fact is entitled to consider the plausibility of any explanation offered by the patentee for the failure to disclose. The district court here found that the "clinically relevant dose" rationale offered by Dr. Uzan for comparing the claimed compound's half-life with that of the alleged prior art compound at a different dose was

² Because Dr. Uzan was found to have knowledge of the purpose for which the half-life comparison was repeatedly argued to the examiner (App. 81a), this case does not present the issue of whether a conclusion that an applicant "should have known of the materiality" of omitted information can be used in inferring intent. Again, Aventis attempts to insert issues into its Petition that are not presented in this case.

“implausible” and “unreasonable.” App. 54a, 67a.³ The district court could also properly consider the fact that, as noted above, the “excuse” offered by Petitioner for concealing the difference in dosage changed several times during the course of the litigation. The inability to keep a story straight is a time-honored signal of lack of credibility.⁴

The trier of fact also is entitled to consider both evidence of the applicant’s good faith as well as the circumstances that might give rise to a motive to deceive the examiner. Every patent applicant has an economic motive to do what it takes to obtain the

³ The district court’s reliance on credibility determinations, and in particular, the shifting explanations provided by Dr. Uzan for his undisclosed different dose comparison, does not, as Aventis asserts, mean that the district court necessarily and improperly applied a negligence standard. Pet. at 13. *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 208 (1976), cited by Aventis as support for that proposition, has nothing to do with determining intent to deceive in the context of inequitable conduct. *Ernst* involved a statute that provided a “due diligence” defense. *Id.* at 208. That this unrelated statute applies a negligence standard does not somehow transform the consideration in inequitable conduct cases of whether a credible excuse was offered for the material misrepresentation into an improper finding of intent based merely on negligence.

⁴ Recognizing these common sense aspects of reasoning from circumstantial evidence does not, as Aventis suggests, shift the burden of proof to the patentee. If, as happened here, the patentee offers excuses and explanations it is entirely reasonable for the court to consider the credibility of those excuses in deciding whether to infer an intent to deceive. The district court explicitly recognized that the defendants had the burden of “affirmatively proving intent . . . at all times.” App. 87a.

valuable property rights associated with a patent, and that motive by itself ordinarily is not sufficient to establish intent to deceive. Here, however, Petitioner faced the unusual situation of seeking FDA approval for enoxaparin after the revocation of the European patent protecting the drug and the consequent abandonment of the U.S. counterpart patent application. The district court fairly could consider that the prospect of generic competition shortly after FDA approval, unbuffered by a period of patent-protected monopoly, would give rise to unusual economic pressure to obtain some kind of patent protection by any possible means.

What Petitioner calls the "sliding scale" applied to a determination of intent is nothing more than the common sense drawing of inferences from circumstantial evidence as described in the preceding paragraphs. All things being equal, higher materiality, implausible excuses and an unusually high economic incentive to obtain a patent are circumstances probative of deceptive intent. Petitioner's attempt to label the process of reasoning from circumstantial evidence a "sliding scale" does not change the elements of the claim and the burden of proof. The trier of fact still must determine, after weighing all the circumstances, whether both

materiality and intent have been established by clear and convincing evidence.⁵

Courts regularly uphold inferences of deceptive intent on the basis of this kind of common sense interpretation of circumstantial evidence. For example, in a recent Eighth Circuit bank fraud case, the defendant received a check for \$90,700 from an insurance company with which he had never done business. He deposited it into his bank account, which then had a balance of \$6, and spent nearly half the money in the next few weeks. The defendant testified that he believed the check was a settlement for a minor car accident in which he was involved a year earlier, but for which he admitted he had never made an insurance claim. Emphasizing the significance of receiving such a large check in the mail and the defendant's incredible explanations for why he thought he was entitled to the money, the court held that a reasonable jury could find intent to defraud beyond a reasonable doubt. *United States v. Peters*, 462 F.3d 953, 959 (8th Cir. 2006); *see also*,

⁵ The Federal Circuit also appropriately allows courts to weigh the levels of materiality and intent in the final equitable balancing step required before reaching a conclusion of inequitable conduct. *Impax Labs.*, 468 F.3d at 1375. This final balancing does not allow inequitable conduct to be based merely on gross negligence. Because that final equitable balancing step occurs only after the threshold findings of materiality and intent have been established by clear and convincing evidence, it cannot lessen the proof necessary to satisfy the intent requirement. Indeed, the primary result of this final balancing step is to provide the court with equitable discretion *not* to find a patent unenforceable even if the court has found both materiality and intent to deceive.

e.g., *United States v. Pennington*, 168 F.3d 1060, 1065 (8th Cir. 1999) (“[P]roof of intent to harm may be inferred from the willful non-disclosure by a fiduciary . . . of material information he has a duty to disclose”) (mail fraud and money laundering suit). What Petitioner misleadingly characterizes as a sliding scale that improperly substitutes gross negligence for intent is merely common sense reasoning that the high significance of an event, misstatement or omission and incredible explanations are relevant circumstances in determining whether there was deceptive intent.

B. The Inequitable Conduct Standard Applied in this Case Is Consistent with This Court’s Decisions on Inequitable Conduct and on the Doctrine of Unclean Hands.

Petitioner asserts that the doctrine of inequitable conduct should be limited to the facts before the Court in three cases that it decided in the 1930s and 1940s:⁶ *Keystone Driller Co. v. General Excavator Co.*, 290 U.S. 240 (1933), *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238 (1944) and *Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co.*, 324 U.S. 806 (1945). Pet. at 10-12. The mere fact that adjectives such as “deliberate,” “corrupt,” “sordid,” and “highly reprehensible” appeared in those cases does not mean that these cases established those concepts as a minimum standard for inequitable conduct. There is nothing in these or any other opinions of this Court that suggests that the application of the

⁶ It should be noted, however, that the defense of inequitable conduct existed before these decisions. See *infra* at 28-29 n.10.

doctrine of inequitable conduct is limited to the extreme conduct identified in those cases.

Indeed, the three decisions on which Petitioner relies do not even address the minimum level of culpability needed to constitute inequitable conduct. *Keystone Driller* addressed whether a sufficient nexus existed between the patentee's filing of a false affidavit in a prior litigation and the equitable relief that the patentee sought in a later action to invoke the doctrine of unclean hands. 290 U.S. at 246-47. The Court found such a nexus and upheld application of the unclean hands doctrine to deny an injunction.⁷

Hazel-Atlas addressed a limited procedural question, whether after-discovered inequitable conduct could be used to vacate a judgment entered in a prior term. 322 U.S. at 239. It was not disputed before this Court that Hazel-Atlas and its counsel had committed inequitable conduct and this Court did not discuss the boundaries of that concept.

Precision Instrument likewise did not address the type or degree of misconduct that would constitute inequitable conduct. It held only that the district

⁷ In its *amicus* brief in support of Petitioner, Washington Legal Foundation (WLF) argues that "the court has declined to apply [the] 'unclean hands' doctrine where the plaintiffs' misconduct did not have a sufficiently 'immediate and necessary relation' to the equitable relief sought, to warrant non-enforcement of the patent." WLF Br. at 17 (quoting *Keystone Driller*). WLF does not explain what this principle has to do with this case and ignores the fact that the misleading half-life comparison at issue here was repeatedly argued by Petitioner to support patentability over repeated rejections by the PTO, thus establishing a significant relationship between the inequitable conduct and the unenforceability relief imposed.

court properly dismissed the complaints for patent infringement based on the doctrine of unclean hands. 324 U.S. at 820. Nowhere did this Court suggest that it was establishing a minimum level of culpability needed to constitute inequitable conduct. It should be noted, however, that this Court expressly recognized that inequitable conduct was not limited to "fraud," much less the "corrupt, sordid and highly reprehensible" fraud standard that Petitioner suggests should apply. *Id.* at 816 (referring to "fraud or other inequitable conduct" constituting unclean hands (emphasis added)).

Petitioner also argues that the standard for inequitable conduct must be "corrected" because it does not contain a reliance element as is required for common law fraud. Pet. at 26. Petitioner raised no such argument below. In any event, the lower courts in this case did not apply a separate reliance requirement when analyzing the claim of inequitable conduct because, under this Court's inequitable conduct and unclean hands precedents, there is none. Unclean hands is a defense premised on the long-standing principle that courts of equity will not provide a remedy to plaintiffs who have not themselves behaved equitably. See *Precision Instrument*, 324 U.S. at 814 ("a self-imposed ordinance that closes the doors of a court of equity to one tainted with inequitableness or bad faith relative to the matter in which he seeks relief").

Moreover, quite apart from the historical reasons why reliance was not an element of the unclean hands defense, recognition of a reliance factor would seriously undermine the disincentive to inequitable conduct. This Court has stressed the importance of maintaining such a disincentive:

"The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope." *Id.* at 816.

A patent applicant will be more likely to conceal material information during patent prosecution if an accused infringer would have to prove not only the concealment of the information, but also that the information would have prevented the issuance of the patent. It often is difficult to predict how an examiner would have responded to the concealed information. Moreover, the claims might have been narrowed in light of the concealed information. An effective patent system requires that examiners, not district court judges, consider material information in the first instance. Imposing a reliance requirement would make it even more likely that patent applicants would conclude that they could get away with not disclosing material information. Applicants easily could decide that they would have the opportunity, if inequitable conduct were raised, to convince a district court judge not familiar with patent prosecution that the patent would have issued anyway.

C. There is No "Circuit Split" or "Split" in Federal Circuit Authority With Respect to What Is Required to Prove the Intent Element of Inequitable Conduct.

Petitioner contends that this Court should grant the petition because there was a split in authority among the regional circuits prior to the creation of the Federal Circuit in 1982 concerning the mental

state required to establish a claim of inequitable conduct. This argument makes no sense. There is no "circuit split" for the Court to resolve with respect to the application of the doctrine of inequitable conduct in proceedings before the Patent Office. This is an issue that is governed by Federal Circuit law, not the law of the regional circuits. The Federal Circuit has required proof of intent to deceive at least since its *en banc* decision in *Kingsdown*.

Nor is there any merit to Petitioner's contention that an "intra-circuit" split exists between panels of the Federal Circuit with regard to the proper standard for claims of inequitable conduct. The Federal Circuit decisions that Petitioner cites as examples of a failure to comply with *Kingsdown* are nothing more than additional examples where all facts and circumstances were considered, including the high materiality of information not disclosed to the Patent Office, in determining whether intent to deceive was established. See *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1313 (Fed. Cir. 2008) ("The required showings of materiality and intent are separate, and a showing of materiality alone does not give rise to a presumption of intent to deceive.") (citing *Kingsdown*); *Ferring B.V. v. Barr Labs., Inc.*, 437 F.3d 1181, 1190-91 (Fed. Cir. 2006) ("Even if an omission is found to be material, the omission must also be found to have been made with the intent to deceive. '[M]ateriality does not presume intent, which is a separate and essential component of inequitable conduct.'") (quoting *GFI, Inc. v. Franklin Corp.*, 265 F.3d 1268, 1274 (Fed. Cir. 2001)). The fact that different appellate judges have reached different conclusions when reviewing the same factual record also does not establish that there is a

split on the proper legal standards that needs to be addressed by this Court.

II. The Question on which Petitioner Seeks Review Is Not Presented by this Case Nor Was It Raised Below.

A. Neither the District Court Nor the Federal Circuit Improperly Conflated Materiality and Intent So As To Allow Inequitable Conduct To Be Proven Merely by Gross Negligence.

Petitioner ignores that the district court carefully considered the full range of circumstantial evidence available, not just the high materiality of the omissions from Dr. Uzan's affidavits, in concluding that there was intent to deceive the Patent Office, not just negligence. What Petitioner is really challenging are the district court's credibility determinations and the sufficiency of the circumstantial evidence the district court relied on in this case. As detailed in the Counterstatement and Part I of the Argument, the circumstantial evidence was more than sufficient to support the district court's inference by clear and convincing evidence that Dr. Uzan concealed the difference in dose with intent to deceive the examiner. Petitioner asks this Court to second guess the district court's careful factual findings. A panel of the Federal Circuit Court of Appeals already undertook the proper clear error analysis and affirmed the factual findings of the district court. This Court is not and should not be in the business of granting petitions for certiorari merely to conduct a second clear error review of facts found by the district court.

B. The Legal Question Petitioner Seeks To Present Was Not Raised Below.

Contrary to Petitioner's assertion, this case does not "present[] a sound vehicle for shaping the inequitable conduct doctrine" (Pet. at 28) because the issues Petitioner now presents for review were not considered by the district court or either of the two Federal Circuit panels below. Accordingly, the Court should apply its "traditional rule" and decline to grant certiorari because the issues raised in the petition were not "pressed or passed upon below." *United States v. Williams*, 504 U.S. 36, 41 (1992) (quoting *Duignan v. United States*, 274 U.S. 195, 200 (1927)).

Petitioner never argued to the district court or the Federal Circuit at any point prior to its petition for rehearing *en banc* that the standards used to determine inequitable conduct were inconsistent with this Court's precedents. None of Petitioner's briefs to the district court or the Federal Circuit on direct appeal cited *Hazel-Atlas*, *Precision Instrument Manufacturing*, or *Keystone Driller*, cases that Petitioner now asserts render the lower courts' judgments erroneous. Similarly, Petitioner never argued in its briefs to the district court or the Federal Circuit panels that the legal standards they applied to the defendants' inequitable conduct claim were inconsistent with the *Kingsdown* decision's requirement that a defendant prove intent, not gross negligence.

In its petition for panel rehearing and rehearing *en banc*, Petitioner for the first time sought to recast its position as a challenge to the applicable legal standard. It is telling that of the 52 cases cited in the Petition, only three were cited in the Brief for

Plaintiff-Appellants in the second Federal Circuit appeal on the issue of intent. The Federal Circuit properly declined to review *en banc* a panel decision based on issues that were never raised before the panel. Not even the judge who dissented on the panel voted to take this case *en banc*. This Court should also decline review. This Court "sits as a court of review," and should not accept Petitioner's invitation to grant certiorari to parse the factual determinations of the district court, or to effect dramatic changes to the law of inequitable conduct based on questions "not pressed or passed upon below."

Although one judge of the Federal Circuit has recently suggested that "the time has come to review [the test for inferring deceptive intent] *en banc*," *Larson Mfg. Co. of S. D., Inc. v. Aluminart Prods. Ltd.*, Nos. 2008-1096, 2008-1174, 2009 WL 691322 (Fed. Cir. Mar. 18, 2009) (Linn, J., concurring), this case, in which intent was appropriately inferred from all the evidence and a challenge to the legal standards for determining intent was not presented below, is not an appropriate vehicle for this Court to consider issues concerning intent to deceive.

III. The Inequitable Conduct Defense Is Crucial to Ensuring the Integrity of Our *Ex Parte* Patent Prosecution System.

Based on a reading of only the Petition and the briefs of the *amici*, one might conclude that the inequitable conduct defense serves no useful purpose, but merely drains the resources of litigants and the judiciary. In fact, as even Judge Rader recognized in dissent in this case, the inequitable conduct doctrine is the only effective mechanism available to ensure the integrity of an *ex parte* patent

prosecution system. Contrary to the assertions of Petitioner and its *amici*, there is no "plague" resulting from the defense of inequitable conduct. Important safeguards exist that appropriately limit the application of the defense and give courts the equitable discretion to decline to apply the defense of patent unenforceability, even when a defendant proves materiality and intent to deceive by clear and convincing evidence.

A. The Inequitable Conduct Defense Is the Only Effective Method of Enforcing the Duty of Candor Owed to the Patent Office.

A patent applicant must persuade the examiner that the claimed invention satisfies various statutory requisites, including utility, novelty and non-obviousness. 35 U.S.C. §§ 101-103. The process is *ex parte*. No one involved in the prosecution of the patent has an economic incentive to uncover problematic prior art or other potentially invalidating information and bring it to the examiner's attention.

The examiners themselves are charged with searching the pertinent scientific literature to determine whether the claimed invention really is novel and non-obvious. But the reality is quite different. It is widely recognized that examiners have insufficient time and resources to undertake a comprehensive search for invalidating prior art. See Doug Litchman & Mark A. Lemley, *Rethinking Patent Law's Presumption of Validity*, 60 STAN. L. REV. 45, 46, 53-54 (2007). The PTO has acknowledged that "the volume of patent applications continues to outpace our capacity to examine them. We have a pending application

backlog of historic proportions.”⁸ See also Statement of Robert D. Budens, President, Patent Office Professional Association, to House Judiciary Committee’s Subcommittee on Courts, the Internet and Intellectual Property at 10-11 (Feb. 27, 2008) (although the average number of claims per issued patent has grown significantly from 1975 to 2005, the amount of time allotted for each examination has remained static, resulting in insufficient time for examinations).⁹

Moreover, much of the information material to patentability simply is not available to the examiner if the applicant fails to disclose it. For example, although no patent may issue for a claimed invention that was on sale more than one year before the filing of the patent application, 35 U.S.C. § 102(b), the examiner will rarely know about the applicant’s commercial activities.

Similarly, examiners often reject as *prima facie* obvious claims to chemical compounds that are structurally similar to compounds with similar properties disclosed in the prior art unless the applicant can show that the claimed compound has unexpectedly superior properties. See *In re Dillon*,

⁸ U.S. Patent & Trademark Office, 2007-2012 Strategic Plan at 6 (2007) (“PTO Strategic Plan”), available at <http://www.uspto.gov/web/offices/com/strat2007/stratplan2007-2012.pdf> (last visited Mar. 23, 2009). The PTO reports a five-fold increase in the number of pending applications between 1987 and 2007. U.S. Patent & Trademark Office, Performance and Accountability Report, FY 2007, table 5 (2007), http://www.uspto.gov/web/offices/com/annual/2007/50303_table3.html (last visited Mar. 23, 2009).

⁹ <http://judiciary.house.gov/hearings/pdf/Budens080227.pdf> (last visited Mar. 23, 2009).

919 F.2d 688, 692-93 (Fed. Cir. 1990) (*en banc*). The applicant is typically the only source for test data to demonstrate such superiority. If the applicant "cherry picks" favorable data to suggest a superiority that the applicant's unpublished data as a whole does not support, there is little chance that the examiner will discover the unfavorable data or be able to make a fully informed assessment of the claimed compound's ostensible superiority. See *Cargill, Inc. v. Canbra Foods, Ltd.*, 476 F.3d 1359, 1365 (Fed. Cir. 2007).

The temptation to conceal material information from the examiner is especially great in the pharmaceutical industry. Pharmaceutical patents that cover commercial drug products are extremely valuable. The introduction of generic competition generally results in the generic products quickly capturing most of the market for the drug in question. Henry Grabowski, *Competition between Generic and Branded Drugs*, in PHARMACEUTICAL INNOVATION: INCENTIVES, COMPETITION AND COST-BENEFIT ANALYSIS IN INTERNATIONAL PERSPECTIVE 153, 160 (Frank A. Sloan & Chee-Ruey Hsieh, eds., 2007). Moreover, if the owner of a pharmaceutical patent sues a generic drug company for patent infringement within time frames specified by statute, the FDA automatically is precluded from approving the generic company's product for sale for 30 months. 21 U.S.C. § 355(j)(5)(B)(iii). Thus, the owner of even a weak or invalid pharmaceutical patent can obtain what amounts to a two and a half year preliminary injunction against generic competition without any assessment of the likelihood of success on its infringement claim.

Given patent applicants' lack of incentives to disclose prior art or other problematic information known to the applicant, and the limited ability of increasingly overworked patent examiners to uncover such information on their own, the integrity of the *ex parte* patent prosecution system requires a mechanism to enforce the duty of candor that patent applicants owe to the Patent Office. Congress has long recognized the defense of patent unenforceability based on inequitable conduct before the Patent Office to be the primary enforcement mechanism.¹⁰

¹⁰ In the Patent Act of 1790, Congress specifically empowered "district court" judges to "repeal" within one year of issuance patents obtained "surreptitiously by, or upon false suggestion." Act of Apr. 10, 1790, ch. 7, § 5, 1 Stat. 109, 111 (1790).

The Patent Act of 1836 established the Patent Office and charged it with examining patent applications. Patent Act of 1836, ch. 357, §§ 1, 5-7, 5 Stat. 117, 117-20 (1836). Although the 1836 Patent Act eliminated the right to bring an affirmative action to seek the repeal of an issued patent, it still allowed a party sued for infringement to assert as a defense that the patent had been "surreptitiously or unjustly obtained." *Id.* at § 15, 5 Stat. 117, 123.

In 1870, Congress again recognized the right of an accused infringer to challenge a patent containing "less than the whole truth" concerning the invention or obtained "surreptitiously or unjustly" and to assert "like defenses" against infringement. Patent Act of 1870, ch. 230, § 61, 16 Stat. 198, 208 (1870).

The 1952 Codification of the Patent Act specifically identified unenforceability as one of the available defenses to infringement. Section 282 of Title 35, which Congress has not materially amended since 1952, provides: "The following shall be defense in any action involving the validity or infringement of a patent and shall be pleaded: (1) Noninfringement, absence of liability for infringement or *unenforceability*" 66 Stat. 792, 812 (July 19, 1952) (emphasis added). By 1952, the term

Only an accused patent infringer has the resources and incentive to prove a breach of this duty. Other methods of policing the duty of candor owed to the Patent Office have proven ineffective and unworkable. The Patent Office, for a period, established a "fraud squad,"¹¹ i.e., a group of "examiners with legal training assigned to the Office of the Assistant Commissioner for Patents" to whom issues of fraud or inequitable conduct could be referred. Notice of Rule-Making, May 19, 1982, 47 Fed. Reg. 21746 (May 19, 1982) (reprinted in 37 C.F.R. § 1.56 (1982)).

The "fraud squad" was short-lived. In October 1988, the PTO announced that its examiners would no longer investigate deceptive intent due to "the lack of tools in the Office to deal with this issue." *Patent and Trademark Office Implementation of 37 C.F.R. § 1.56*, 1095 OFF. GAZ. PAT. OFFICE 16 (Oct. 11, 1988). The PTO concluded that "[a] court, with subpoena power, is presently the best forum to consider duty of disclosure issues under the present

unenforceability as used by the courts referred to deliberately withholding information from the PTO. See, e.g., *Ingersoll Milling Mach. Co. v. Gen. Motors Corp.*, 110 F. Supp. 12, 34-35 (N.D. Ill. 1952).

¹¹ *Nilssen v. Osram Sylvania, Inc.*, 440 F. Supp. 2d 884, 898 (N.D. Ill. 2006).

evidentiary standard for finding an 'intent to mislead.'" *Id.*¹²

B. There is No "Plague" Resulting from the Inequitable Conduct Defense.

The only authority that Petitioner cites for its statement that the inequitable conduct defense is asserted in "virtually every patent infringement case" and that it consequently has become a "plague" is that "the Federal Circuit has decided no fewer than 42 inequitable conduct cases over the past three years." Pet. at 24-25. According to the caseload statistics published by the Federal Circuit, that constitutes approximately 5 percent of the total number of appeals in patent cases that were adjudicated on the merits in the Federal Circuit during the court's last three fiscal years.¹³ Even under Petitioner's inflated rhetoric, 5 percent of all patent appeals can hardly constitute a "plague."

The PATSTATS Database maintained by the University of Houston Law Center, a database of the

¹² The problem of inequitable conduct cannot be addressed by separate tort or antitrust litigation against or criminal prosecution of the perpetrators of inequitable conduct. Separate civil litigation would require duplicative relitigation of the issues raised in the infringement suit and it is difficult to imagine that prosecuting patent lawyers and inventors for inequitable conduct would be a priority for the criminal justice system. The only practical forum in which to enforce the patent applicant's duty of disclosure is in the action in which the patentee seeks to enforce the patent.

¹³ The Federal Circuit reports that during its three fiscal years from 2006-2008, 82 patent cases were adjudicated on the merits. See <http://www.cafc.uscourts.gov/statistics.html> (Caseload by Category, Table of Data to accompany pie charts) (last visited Mar. 23, 2009).

dispositions of patent infringement actions, which Petitioner cited in its Petition for Rehearing *En Banc* to the Federal Circuit in this case, similarly shows that the courts have addressed the inequitable conduct defense on the merits in only a modest percentage of recent patent infringement decisions. The data reported since 2006 show that approximately 13.5% of decisions in patent infringement actions have included an actual adjudication of the inequitable conduct defense, either by summary judgment or at trial.¹⁴ While the defense of inequitable conduct is likely pleaded in a higher percentage of cases, the fact that it is addressed on the merits in fewer than one out of seven decisions demonstrates that the courts and

¹⁴ Out of the universe of patent infringement decisions tracked by the PATSTATS database, 43 out of the 359 decisions from 2006 and 65 out of the 439 decisions from 2007 addressed a claim of inequitable conduct either through summary judgment or after trial. See <http://www.patstats.org/2006.htm> (last visited Mar. 24, 2009); <http://patstats.org/2007%20full%20year.htm> (last visited Mar. 24, 2009); [http://www.patstats.org/Cumulative Caselist through 3Q08.xls](http://www.patstats.org/Cumulative%20Caselist%20through%203Q08.xls) (last visited Mar. 24, 2009).

litigants are not being choked with a “plague” of litigation over the inequitable conduct defense.¹⁵

The modest percentage of patent infringement actions in which the inequitable conduct defense is addressed on the merits also tends to show that the checks that exist to prevent the pleading of unfounded claims of inequitable conduct and that permit their disposition early in a litigation are working. A number of safeguards exist. Initially, the defense of inequitable conduct must be pleaded with the same particularity as fraud under Rule 9(b) and inadequately pleaded claims may be dismissed at the outset of a case. Fed. R. C. P. 9(b); *See also Central Admixture Pharm. Servs., Inc. v. Advanced Cardiac Solutions, P.C.*, 482 F.3d 1347, 1356-57 (Fed. Cir. 2007). Indeed, before a pleading is ever filed, counsel must satisfy its obligations under Rule 11 to ensure that any inequitable conduct charges have the requisite legal and evidentiary support. Fed. R. Civ. P. 11. Far from permitting a reflexive pleading of inequitable conduct in every case, the

¹⁵ Aventis’s argument that patent quality decreases because the alleged “proliferation of inequitable conduct charges gives patent applicants strong incentives to inundate the PTO with information in the hopes of forestalling an inequitable conduct charge” is without merit. Pet. at 28. The Patent Office Professional Association (POPA), a professional association of PTO examiners—the group that Aventis seeks to protect from being inundated—has told Congress that it believes that any weakening of the inequitable conduct defense would make the PTO’s job more difficult by “remove[ing] . . . the enforcement mechanism” that maintains the quality of applicant disclosures. Patent Office Professional Association, Congressional White Paper, *The Patent Reform Act Will Hurt, Not Help, the U.S. Patent System* (Aug. 2007), available at http://www.piausa.org/patent_reform/articles/the_patent_reform_act_will_hurt_not_help_the_u_s_patent_system.

requirements of Rules 9(b) and 11 typically force defendants to wait until after obtaining discovery before asserting an inequitable conduct defense, as the defendants did in this case. As discussed above, if a claim of inequitable conduct proceeds to resolution by a district court on summary judgment or by trial, the defendant faces elevated evidentiary standards, and must prove materiality and intent by clear and convincing evidence. Even if a district court finds that a defendant has met that burden, it is obligated to consider separately whether the facts warrant the exercise of the courts' equitable discretion to grant the defense of unenforceability.¹⁶ *eSpeed, Inc. v. BrokerTec USA, L.L.C.*, 480 F.3d 1129, 1135 (Fed. Cir. 2007). Collectively, these safeguards—a strict pleading standard, an elevated burden of proof, and a requirement that courts

¹⁶ *Amici curiae* argue that the Court should grant the petition for certiorari in order to correct what WLF describes as a “fundamental deficiency”—that a finding of inequitable conduct results in the defense of unenforceability, not a menu of possible remedies. As an initial matter, the issue of what remedies should be available for inequitable conduct is beyond the scope of the question presented by the Petition. Moreover, as discussed above in the text, district courts are obligated to weigh the equities to determine whether unenforceability is warranted, even when a defendant has proven the elements of inequitable conduct by clear and convincing evidence. District courts thus have significant discretion to limit the application of the defense to cases in which unenforceability is warranted based on the equities. Furthermore, WLF's and Nilsson's arguments fail to recognize that unenforceability is defined in the Patent Act as a defense. 35 U.S.C. § 282. The outcome of proving any defense, be it laches, the expiration of a statute of limitations or inequitable conduct, is that it provides a defense to the claim asserted.

undertake an additional analysis as to whether all the facts and circumstances warrant the remedy of unenforceability—guard against any risk that honest holders of valid patents will find themselves unable to enforce those patents.

CONCLUSION

For the foregoing reasons, this Court should deny the petition.

Respectfully submitted,

FRANCIS C. LYNCH

Counsel of Record

HENRY C. DINGER

LAURIE S. GILL

ROBERT D. CARROLL

GOODWIN PROCTER LLP

Exchange Place

53 State Street

Boston, Mass. 02109

(617) 570-1000

Attorneys for Respondent

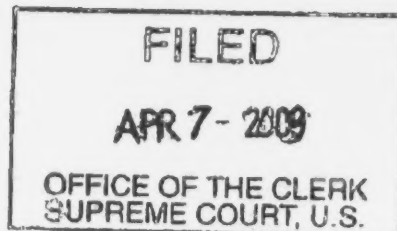
Teva Pharmaceuticals USA,

Inc.

March 27, 2009

125

(6)



No. 08-937

IN THE
Supreme Court of the United States

AVENTIS PHARMA S.A.
AND AVENTIS PHARMACEUTICALS INC.,
Petitioners,
v.

AMPHASTAR PHARMACEUTICALS, INC.
AND TEVA PHARMACEUTICALS USA, INC.,
Respondents.

**On Petition For A Writ Of Certiorari
To The United States Court Of Appeals
For The Federal Circuit**

REPLY BRIEF FOR PETITIONERS

DONALD R. DUNNER
ALLEN M. SOKAL
FINNEGAN, HENDERSON,
FARABOW, GARRETT &
DUNNER, LLP
901 New York Avenue, N.W.
Washington, D.C. 20001
(202) 408-4014

THEODORE B. OLSON
MARK A. PERRY
Counsel of Record
MATTHEW D. MCGILL
MINODORA D. VANCEA
GIBSON, DUNN & CRUTCHER LLP
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 955-8500

Counsel for Petitioners

RULE 29.6 STATEMENT

The corporate disclosure statement included in the petition for a writ of certiorari remains accurate.

TABLE OF CONTENTS

	Page
REPLY BRIEF FOR PETITIONERS	1
CONCLUSION	9

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.</i> , 725 F.2d 1350 (Fed. Cir. 1984)	6
<i>Aventis Pharma S.A. v. Amphastar Pharms., Inc.</i> , No. 03-00887 (C.D. Cal. Feb. 17, 2009)	7
<i>Cooter & Gell v. Hartmarx Corp.</i> , 496 U.S. 384 (1990)	6
<i>eBay Inc. v. MercExchange LLC</i> , 547 U.S. 388 (2006)	2, 8
<i>Ernst & Ernst v. Hochfelder</i> , 425 U.S. 185 (1976)	6
<i>Koon v. United States</i> , 518 U.S. 81, 100 (1996)	6
<i>KSR International Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007)	2
<i>Larson Mfg. Co. of S.D. v. Aluminart Prods. Ltd.</i> , No. 2008-1096 (Fed. Cir. Mar. 18, 2009)	1, 3, 5
<i>Philadelphia Newspapers, Inc. v. Hepps</i> , 475 U.S. 767 (1986)	7
<i>United States v. Wells</i> , 519 U.S. 482 (1997)	3

<i>United States v. Williams</i> , 504 U.S. 36 (1992).....	3
<i>In re Winship</i> , 397 U.S. 358, 367-68 (1970).....	7
<i>Yee v. City of Escondido</i> , 503 U.S. 519 (1992).....	4

Other Authorities

Nate Raymond, <i>A Full-Court Press for Patent Credibility: Criticized for Decisions and Threatened by Congress, the Federal Circuit Starts Playing Some Public Defense</i> , LEGAL TIMES, Mar. 16, 2009	1
Nate Raymond, <i>What's the Right Standard for Inequitable Conduct? A Federal Circuit Judge Calls for the Court to Make Up Its Mind</i> , The AmLaw Litigation Daily, Mar. 20, 2009, http://www.law.com/jsp/ tal/digestTAL.jsp?id=1202429247251	1
Senator Orrin G. Hatch, Address to the United States Court of Appeals for the Federal Circuit Symposium (Mar. 18, 2009), http://legaltimes.typepad.com/fil es/03182009-press-club-speech.pdf	1

REPLY BRIEF FOR PETITIONERS

While this petition has been pending, the Chief Judge of the Federal Circuit has publicly acknowledged that court's conflicting standards for inequitable conduct.¹ Another Federal Circuit judge has also noted not only this conflict, but also the conflict with this Court's precedent, the impropriety of the standard challenged in this petition, and the need for a more stringent and uniform standard.² And one of the Senate's leading proponents of patent reform has also emphasized the exceptional importance of the issue, and (joining numerous judges, scholars, practitioners, and national organizations) noted the acute need for its resolution.³

In light of developments such as these, respondents cannot deny that virtually every knowledgeable observer of our patent system has concluded

¹ See Nate Raymond, *A Full-Court Press for Patent Credibility: Criticized for Decisions and Threatened by Congress, the Federal Circuit Starts Playing Some Public Defense*, LEGAL TIMES, Mar. 16, 2009, at 13.

² *Larson Mfg. Co. of S.D. v. Aluminart Prods. Ltd.*, No. 2008-1096 (Fed. Cir. Mar. 18, 2009) (Linn, J., concurring); see also Nate Raymond, *What's the Right Standard for Inequitable Conduct? A Federal Circuit Judge Calls for the Court to Make Up Its Mind*, The AmLaw Litigation Daily, Mar. 20, 2009, <http://www.law.com/jsp/tal/digestTAL.jsp?id=1202429247251>.

³ Senator Orrin G. Hatch, Address to the United States Court of Appeals for the Federal Circuit Symposium at 3-4 (Mar. 18, 2009), <http://legaltimes.typepad.com/files/03182009-press-club-speech.pdf> (explaining, *inter alia*, that the current application of the doctrine encourages applicants to "deluge" the PTO with information, and that reform of the doctrine will thus "have the most favorable impact on patent quality and the ability for the USPTO to reduce its pendency").

that the inequitable conduct doctrine is in disarray. Nor can respondents credibly contest the other factors that demonstrate the need for this Court's review: This Court has not revisited the doctrine in more than 60 years, the lower court decisions are in conflict with one another and this Court's precedents, and the internally divided Federal Circuit has passed up repeated opportunities to take this issue en banc, including in this case. And despite all this, the pending reform legislation does not deal with the issue at all. Thus, the task of sorting out this important aspect of patent law falls on this Court, as it has in other contexts in recent Terms. See *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 426 (2007); *eBay Inc. v. MercExchange LLC*, 547 U.S. 388 (2006). The inequitable conduct doctrine in patent cases is judge-made in every sense, and can (and should) be shaped by the Judiciary to conform to the broader policies of the Progress Clause and the Patent Act.

This case is a particularly appropriate vehicle for this Court to revisit the inequitable conduct doctrine. The decision below, which strips Aventis of patent rights in a drug with billions of dollars in annual sales, is an affront to the traditional principles of equity on which it purports to be based. Review is warranted now.

1. The question presented is whether an inequitable conduct determination may be premised on a sliding scale between intent and materiality. See Pet. i. In apparent recognition that this question warrants review, respondents devote much of their energies to denying that it is even presented. Amphastar Opp. i; Teva Opp. i. They are, of course, quite wrong. Respondents' contention that the courts below did not employ a sliding scale of intent and materiality is completely, conclusively, and unequivocally refuted by the opinions that both the dis-

strict court and the court of appeals issued to explain their respective decisions in this case.

The district court could hardly have been clearer: “The more material the omission or the misrepresentation, the lower the level of intent required to establish inequitable conduct.” Pet. App. 49a (internal citation omitted); *see also id.* at 87a (finding intentional misconduct because “[t]he elements of nondisclosure and high materiality have been admitted, and no credible excuse demonstrated”).

The Federal Circuit majority was just as clear: “[T]he more material the omission or misrepresentation, the less intent that must be shown to elicit a finding of inequitable conduct.” Pet. App. 18a (internal citation omitted).

Judge Rader dissented on this very point, criticizing the improper “[m]erging [of] intent and materiality” under the majority’s standard, and highlighting several previous cases in which the Federal Circuit had “emphasized materiality almost to the exclusion of [the] intent requirement.” Pet. App. 33a (dissenting opinion).

Judge Rader is right. As we described in the petition (at 13), the non-disclosure of material information is a necessary but not sufficient element of fraud or inequitable conduct. The complainant also must prove that the material information was *intentionally* withheld. Under the sliding scale, however, intent is conflated with materiality, effectively permitting a finding of inequitable conduct to be predicated on as little as a negligent omission. *See Larson Mfg. Co. of S.D. v. Aluminart Prods. Ltd.*, No. 2008-1096, slip op. at 5 (Fed. Cir. Mar. 18, 2009) (Linn, J., concurring) (explaining that the two prongs at which the Federal Circuit looks before inferring intent are not “evidence of deceptive intent. The first is evidence of materiality; the second is evidence of negligence.”).

This standard makes a complete mockery of this Court's inequitable conduct and fraud precedents. See Pet. 10-19.

2. After denying that the decisions below mean what they say, respondents maintain that Aventis "waived" any challenge to the sliding scale. Nonsense.

The fact that the Federal Circuit, as well as the district court, applied the sliding scale to find intent to deceive wholly disposes of respondents' waiver contention. This Court "may address a question properly presented in a petition for certiorari if it was 'pressed [in] or passed on' by the Court of Appeals." *United States v. Wells*, 519 U.S. 482, 488 (1997) (citation omitted; emphasis added); see also *United States v. Williams*, 504 U.S. 36, 41 (1992) (following "traditional rule" that "permit[s] review of an issue not pressed so long as it has been passed upon"). Accordingly, there can be no dispute that the question presented has been effectively preserved for review.

Moreover, Aventis objected to the finding of intent to deceive (Aventis C.A. Br. 44-58), and in this Court it "can make any argument in support of that claim; parties are not limited to the precise arguments they made below." *Yee v. City of Escondido*, 503 U.S. 519, 534-535 (1992).

In short, Aventis consistently argued that respondents failed to prove the legal requirements for finding intent to deceive; the district court rejected these arguments as "contrary" to the sliding scale standard (Pet. App. 82a); when Aventis urged the Federal Circuit to reverse the district court's legally and factually erroneous determination of intent (Aventis C.A. Br. 44, 58), respondents urged the panel to apply the sliding scale, arguing that "[f]ailure to disclose highly material information

known to the patent applicant" is sufficient to show intent to deceive "in the absence" of proof by Aventis of its innocence (Teva C.A. Br. 31); the panel expressly passed on the issue, applying the sliding scale; the dissent criticized the majority for applying the sliding scale; and Aventis then explicitly challenged the sliding scale at the rehearing stage—the first point at which the Federal Circuit could have overturned settled precedent. Respondents' suggestion that this is still not enough to preserve the issue lacks merit.

3. Perhaps recognizing that the courts below applied a legally impermissible *standard*, respondents devote most of their attention to the *facts* of this case. Even if respondents were right on the facts, the confusing, contradictory, and incorrect standard applied in this and other inequitable conduct cases would still warrant review by this Court.

And of course, respondents are just wrong on the merits. As we discussed in the petition (at 13-16), even assuming that the omission was material—a question on which Judge Rader expressed grave doubt in light of the PTO's subsequent reissue of the patent without reliance on Example 6—respondents failed to prove that the omission was intentional. All that the lower courts found was materiality and that *Aventis* could not *disprove* intent. Thus even accepting every one of the district court's factual findings, they do not satisfy this Court's standard for fraud or inequitable conduct: clear and convincing proof by *respondents* of intent. See *Larson Mfg.*, slip op. at 5 (Linn, J., concurring) (the evidence of materiality and negligence based on which the Federal Circuit shifts the burden to the patentee to disprove intent is "insufficient as a matter of law to establish a clear and convincing 'threshold level' of deceptive intent before the [burden-shifting] prong can ever properly

come into play"). That is purely a legal error, and it was caused by the Federal Circuit's sliding scale, which eliminated the separate requirement of proving intent to deceive and shifted the burden of proof to Aventis to demonstrate a credible explanation for the nondisclosure once high materiality was shown. See Pet. App. 87a (inferring intent because "[t]he elements of nondisclosure and high materiality have been admitted, and no credible excuse demonstrated"); see also, e.g., *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1363 (Fed. Cir. 1984) (a high showing of materiality "would necessarily create an inference that its nondisclosure was 'wrongful'").

Such legal error is "by definition" an abuse of discretion. *Koon v. United States*, 518 U.S. 81, 100, 116 (1996); see also *Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 400-402 (1990). That is a complete response to respondents' invocation of the abuse-of-discretion standard. It also dispels any notion that this case is unduly fact-bound: All fraud cases come from particular facts, but they merit this Court's attention when those facts are analyzed under the wrong legal standard. See, e.g., *Ernst & Ernst v. Hochfelder*, 425 U.S. 185 (1976).

Respondents also observe that intent may be proved by circumstantial evidence. Teva Opp. 10-11. But that uncontroversial proposition is not at issue here. See Pet. 16 n.3. By focusing on the type of evidence, respondents hope to obscure the more fundamental point that intent is an *essential element* of their claim, on which *they* bore the *burden of proof*. The invocation of the sliding scale in the courts below relieved respondents of that burden, and thus no court has found, under the proper legal standard, whether respondents proved intentional misconduct *with any kind of evidence*.

Indeed, this Court has recognized that a legal test that impacts the burden of proof is often outcome-determinative. See *In re Winship*, 397 U.S. 358, 367-68 (1970); *Philadelphia Newspapers, Inc. v. Hepps*, 475 U.S. 767, 778 (1986). This case is no exception from that rule: Judge Pfaelzer, the district judge who presided over the inequitable conduct proceedings, has in fact indicated that the court might reach a different result under the standard proposed by Aventis in this Court. In an opinion addressing Amphastar's antitrust counterclaims in the same litigation, issued while this petition was pending, the district court expressly acknowledged its prior factual findings but noted—citing the petition filed in this Court—that Aventis has advanced a good-faith argument for a change in the law that could alter the result.⁴

4. Respondents also attempt to downplay the Federal Circuit's departure from this Court's precedent, arguing that there is nothing in this Court's inequitable conduct cases "that suggests that the application of the doctrine of inequitable conduct is limited to the extreme conduct identified in those cases." Teva Opp. 17-18. But in doing so, they concede that the conduct here is not the kind of "extreme conduct identified in those cases," while at the same time failing to recognize that it is not only the actual facts of those cases, but also this Court's requirement of *deceptive intent* that cannot be squared with the sliding scale and its resulting *negligence* standard.

⁴ See *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, No. 03-00887, slip op. at 16 (C.D. Cal. Feb. 17, 2009) ("Even though Aventis' factual position suffered from 'a total absence of indicia of credibility,' . . . , [Aventis's petition for certiorari] has made credible legal argument to change the law or to adopt a not-unreasonable legal interpretation *that may change the legal implications of the facts*") (emphasis added).

Respondents' attempt to distinguish this Court's non-patent decisions addressing the intent element of fraud actions fares no better. By arguing that *Ernst & Ernst* and other cases have "nothing to do with determining intent to deceive in the context of inequitable conduct" (Teva Opp. 14 n.3), respondents are asking the Court to recognize a special rule (and a more lenient one at that) for patent cases than other federal-law cases. As we show in the petition (at 15), the Court's recent patent decisions, in sharp contrast, uniformly hold that patent litigants are subject to the *same* standards as parties to other complex federal litigation.

In this regard, it bears noting how little either respondent has to say on the "one size fits all" remedy imposed by the Federal Circuit—upon a finding of inequitable conduct, a patent is automatically rendered unenforceable with no weighing of the equities. Such an inflexible bright-line rule is inconsistent with the equitable moorings of the doctrine, and runs smack into this Court's decision in *eBay*, 547 U.S. at 391-92, which reminds lower courts that equitable principles must be applied equitably in patent cases. There is nothing equitable about the result here.

5. Finally, respondents suggest that review is unwarranted because the inequitable conduct doctrine plays an important role in our patent system. But *Aventis* does not dispute that the doctrine is important; our concern is not with the doctrine itself, but with its haphazard and overly lenient application, with the result that all participants in the patent system have no clear rules by which to guide their conduct, and the owners of extremely valuable patents may have them stripped by one panel and sustained by another. We think the standard should be more rigorously tailored to instances of actual fraud on the PTO; but at minimum it should be uni-

form to ensure a level playing field for all. The National Academies of Science and Engineering, the ABA Section of Intellectual Property Law, a number of Federal Circuit judges, and various *amici* agree. *See, e.g.*, Pet. 26-28. This Court should step in to clarify the burden and standard for proving inequitable conduct, and to address the remedy for such conduct if proved.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

DONALD R. DUNNER

ALLEN M. SOKAL

FINNEGAN, HENDERSON,

FARABOW, GARRETT &

DUNNER, LLP

901 New York Avenue, N.W.

Washington, D.C. 20001

(202) 408-4014

THEODORE B. OLSON

MARK A. PERRY

Counsel of Record

MATTHEW D. MCGILL

MINODORA D. VANCEA

GIBSON, DUNN & CRUTCHER LLP

1050 Connecticut Avenue, N.W.

Washington, D.C. 20036

(202) 955-8500

April 7, 2009

121

③

No. 08-937

Supreme Court, U.S.
FILED

FEB 25 2009

OFFICE OF THE CLERK

IN THE
Supreme Court of the United States

AVENTIS PHARMA S.A.
AND AVENTIS PHARMACEUTICALS INC.,
Petitioners,

v.

AMPHASTAR PHARMACEUTICALS, INC.
AND TEVA PHARMACEUTICALS USA, INC.,
Respondents.

On Petition For A Writ Of Certiorari
To The United States Court Of Appeals
For The Federal Circuit

**BRIEF FOR *AMICI CURIAE* OLE NILSSEN
AND GEO FOUNDATION LTD. IN
SUPPORT OF PETITIONERS**

JONATHAN HILL
JENNER & BLOCK LLP
330 N. Wabash Avenue
Chicago, IL 60611
(312) 222-9350

PAUL M. SMITH*
MARC A. GOLDMAN
JENNER & BLOCK LLP
1099 New York Avenue, N.W.
Washington, D.C. 20001
(202) 639-6000

February 25, 2009

** Counsel of Record*

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES.....	ii
INTEREST OF <i>AMICI CURIAE</i>	1
SUMMARY OF ARGUMENT.....	3
ARGUMENT	8
I. The Federal Circuit Has Eviscerated the Important Requirement of Deceptive Intent	8
II. The Decision Below is Predicated on a Relaxed Standard of Materiality That Exacerbates the Effects of the Federal Circuit's Evisceration of the Intent Requirement	14
III. The Automatic Sanction of Unenforceability Is Disproportionate	19
IV. The Court Should Grant Review Because the Evolution of the Inequitable Conduct Doctrine Has Sweeping Negative Consequences.....	23
CONCLUSION	24

TABLE OF AUTHORITIES

CASES

<i>A.H. Emery Co. v. Marcan Products Corp.</i> , 389 F.2d 11 (2d Cir. 1968)	8
<i>ABF Freight System, Inc. v. NLRB</i> , 510 U.S. 317 (1994).....	16
<i>American Hoist & Derrick Co. v. Sowa & Sons, Inc.</i> , 725 F.2d 1350 (Fed. Cir. 1984)	15
<i>BMW of North America, Inc. v. Gore</i> , 517 U.S. 559 (1996).....	19, 20
<i>Bose Corp. v. Consumers Union of U.S., Inc.</i> , 466 U.S. 485 (1984)	13
<i>Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.</i> , 267 F.3d 1370 (Fed. Cir. 2001)	10
<i>Buckman Co. v. Plaintiffs' Legal Committee</i> , 531 U.S. 341 (2001)	16, 21
<i>Burlington Industries, Inc. v. Dayco Corp.</i> , 849 F.2d 1418 (Fed. Cir. 1988)	7, 9
<i>City of Milwaukee v. Illinois</i> , 451 U.S. 304 (1981).....	16
<i>Corona Cord Tire Co. v. Dovan Chemical Corp.</i> , 276 U.S. 358 (1928).....	15
<i>Digital Control, Inc. v. Charles Machine Works</i> , 437 F.3d 1309 (Fed. Cir. 2006)	4, 6, 15
<i>eBay Inc. v. MercExchange, L.L.C.</i> , 547 U.S. 388 (2006).....	22

<i>Eresch v. Braecklein</i> , 133 F.2d 12 (10th Cir. 1943).....	8
<i>Exxon Shipping Co. v. Baker</i> , 128 S. Ct. 2605 (2008).....	22
<i>Ferring B.V. v. Barr Laboratories, Inc.</i> , 437 F.3d 1181 (Fed. Cir. 2006).....	17
<i>Hazel-Atlas Glass Co. v. Hartford-Empire Co.</i> , 322 U.S. 238 (1944)	8, 14, 21
<i>Hoffman-La Roche, Inc. v. Promega Corp.</i> , 323 F.3d 1354 (Fed. Cir. 2003)	12, 17, 23
<i>Keystone Driller Co. v. General Excavator Co.</i> , 290 U.S. 240 (1933)	5, 8
<i>Kingsdown Medical Consultants, Ltd. v. Hollister Inc.</i> , 863 F.2d 867 (Fed. Cir. 1988).....	9
<i>Moore v. Chesapeake & Ohio Railway Co.</i> , 340 U.S. 573 (1951).....	13
<i>Mowry v. Whitney</i> , 81 U.S. 434 (1871).....	21
<i>National Cable & Telecommunication Ass'n v. Brand X Internet Services</i> , 545 U.S. 967 (2005).....	16
<i>Nilssen v. Osram Sylvania, Inc.</i> , 440 F. Supp. 2d 884 (N.D. Ill. 2006), <i>aff'd</i> , 504 F.3d 1223 (Fed. Cir. 2007), <i>cert. denied</i> , 128 S. Ct. 2938 (2008).....	11
<i>Nilssen v. Osram Sylvania, Inc.</i> , 504 F.3d 1223 (Fed. Cir. 2007), <i>cert. denied</i> , 128 S. Ct. 2938 (2008).....	2, 6, 11, 12, 17, 21

<i>Nilssen v. Osram Sylvania, Inc.</i> , 528 F.3d 1352 (Fed. Cir. 2008)	3
<i>Novo Nordisk Pharmaceuticals, Inc. v. Bio- Technology General Corp.</i> , 424 F.3d 1347 (Fed. Cir. 2005)	12
<i>Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.</i> , 984 F.2d 1182 (Fed. Cir. 1993).....	10
<i>Praxair, Inc. v. ATMI, Inc.</i> , 543 F.3d 1306 (Fed. Cir. 2008)	10
<i>Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.</i> , 324 U.S. 806 (1945)	6-7, 8, 9, 14, 19
<i>Solem v. Helm</i> , 463 U.S. 277 (1983)	20
<i>Star Scientific, Inc v. R.J. Reynolds Tobacco Co.</i> , 537 F.3d 1357 (Fed. Cir. 2008), <i>petition for cert. filed</i> , 77 U.S.L.W. 3437 (2009) (No. 08-918).....	4, 10
<i>State Farm Mutual Automotive Insurance Co. v. Campbell</i> , 538 U.S. 408 (2003).....	22
<i>Ulead Systems, Inc. v. Lex Computer & Management Corp.</i> , 351 F.3d 1139 (Fed. Cir. 2003).....	17
<i>United States v. Bajakajian</i> , 524 U.S. 321 (1998).....	20
<i>Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.</i> , 435 U.S. 519 (1978)	16

CONSTITUTIONAL PROVISIONS AND REGULATIONS

U.S. Const. art. I, § 8, cl. 8.....	8
37 C.F.R. § 1.56(b) (2004)	15, 16

LEGISLATIVE MATERIAL

S. Rep. No. 110-259 (2008).....	3, 17
---------------------------------	-------

OTHER AUTHORITIES

Ad Hoc Committee on Rule 56 and Inequitable Conduct, American Intellectual Property Law Association, <i>The Doctrine of Inequitable Conduct and the Duty of Candor in Patent Prosecution: Its Current Adverse Impact on the Operation of the United States Patent System</i> , 16 AIPLA Q.J. 74 (1987).....	9
American Bar Association Section of Intellectual Property, <i>A Section White Paper: Agenda for 21st Century Patent Reform</i> (2007).....	7-8
Donald S. Chisum, <i>Patent Law and the Presumption of Moral Regularity: A Critical Review of Recent Federal Circuit Decisions on Inequitable Conduct and Willful Infringement</i> , 69 J. PAT. & TRADEMARK OFF. SOC'Y 27 (1987)	20
Duty of Disclosure, 57 FED. REG. 2021 (Jan. 17, 1992).....	16

- James E. Hanft & Stacey S. Kerns, *The Return of the Inequitable Conduct Plague: When "I Did Not Know" Unexpectedly Becomes "You Should Have Known,"* INTELL. PROP. & TECH. L.J., Feb. 2007..... 13
- Paul M. Janicke, *Do We Really Need So Many Mental and Emotional States in United States Patent Law?* 8 TEX. INTELL. PROP. L.J. 279 (2000) 24
- Kevin Mack, *Reforming Inequitable Conduct To Improve Patent Quality*, 21 BERKELEY TECH. L.J. 147 (2006) 23
- Charles M. McMahon, *Intent to Commit Fraud on the USPTO: Is Mere Negligence Once Again Inequitable?* 27 AIPLA Q.J. 49 (1999)..... 13
- National Research Council, *A Patent System for the 21st Century* 82-83 (2004)..... 24
- 4 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT (2006)..... 20
- Lynn C. Tyler, Kingsdown *Fifteen Years Later: What Does It Take to Prove Inequitable Conduct?* 13 FED. CIR. B.J. 267 (2003)..... 23

INTEREST OF *AMICI CURIAE*¹

Amici are Ole Nilssen, a visionary inventor, and Geo Foundation Ltd. ("Geo"), to which he transferred patent licensing rights in 2000. During a career spanning 50 years, Nilssen has contributed greatly to the development of energy-saving devices, while assembling a portfolio of over 240 patents. These include the first successful configuration of the compact fluorescent light bulb or "CFL," the often spiral-shaped bulb that can be screwed into a regular socket and is fast replacing the traditional incandescent light bulb. CFLs use about 75% less energy than standard incandescent bulbs, last years longer, and thus will save the public hundreds of billions of dollars.

Amici are strongly interested in the outcome of this petition, because 16 of Nilssen's patents have been declared unenforceable based on rulings similar to those at issue here, including application of what amounts to a negligence standard to an assessment of intent. For example, a district court found inequitable conduct with respect to one of Nilssen's CFL patents (the '270 patent (patent number 5,233,270)), worth hundreds of millions dollars, solely because he underpaid maintenance fees on the

¹ The parties have consented to the filing of this brief. Counsel for all parties have been given notice of the *amici curiae's* intention to file this brief as required by Supreme Court Rule 37.2(a). No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation of this brief. No person other than *amici curiae* made a monetary contribution to its preparation or submission.

patent by \$5,000 after it had issued, underpayments that had no possible effect on patentability. It found this underpayment to be intentional even though there was no affirmative evidence of intent and Nilssen offered an explanation the Federal Circuit acknowledged was not unreasonable as to why he believed his payments were in accord with the law. *Nilssen v. Osram Sylvania, Inc.*, 504 F.3d 1223, 1231-32, 1235 (Fed. Cir. 2007), *cert. denied*, 128 S. Ct. 2938 (2008). The Federal Circuit explained, however, that “inadvertence can carry an applicant only so far.” *Id.* at 1235. The court appeared to recognize that it was effectively applying what amounted to a negligence standard, explaining that Nilssen, who had prosecuted his patents pro se, “thought he didn’t need professional patent help. The result of this case, regrettably, proves that he was wrong.” *Id.*

The issues in the *Aventis* petition before this Court are similar to those raised in *Nilssen* and many other cases. Indeed, Judge Rader’s dissent in *Aventis* cited the *Nilssen* ruling on underpaid maintenance fees as a leading example of recent decisions that have “too often emphasized materiality almost to the exclusion of the lofty intent requirement for inequitable conduct, . . . [m]erging intent and materiality at levels far below” what the law ostensibly requires. Pet. App. 33a. And the Senate Judiciary Committee has cited the *Nilssen* case as an example of decisions applying the materiality requirement in a manner that improperly underemphasizes the question whether the claimed omission or misstatement was important

to the Patent and Trademark Office's ("PTO's") decision to issue the patent. S. Rep. No. 110-259, at 33 n.155 (2008). Clearly, Nilssen's omissions were not important to patentability, as Nilssen informed the PTO of the omissions, and the PTO still issued reexamination certificates for five of the patents held unenforceable, and otherwise confirmed the patentability of numerous claims from several other of those patents before vacating the reexamination proceedings as effectively moot in light of the unenforceability determinations.

The effects of the decision in Nilssen's own case have already been devastating. The initial decision resulted in the unenforceability of patents worth hundreds of millions of dollars, as well as an attorneys' fees award of more than \$5 million dollars. *Nilssen v. Osram Sylvania, Inc.*, 523 F.3d 1352 (Fed. Cir. 2008). And it has led to decisions by other courts finding other Nilssen patents unenforceable on collateral estoppel grounds, because, for example, the same maintenance fee issue existed for those patents. The consequences of a decision on the present petition, establishing whether there will be new standards for inequitable conduct determinations, will impact Nilssen's remaining enforceable patents, as well as his continuing inventive efforts.

SUMMARY OF ARGUMENT

The question presented in the petition is of critical importance to inventors well beyond Aventis, as well as to the patent system as a whole. The Federal Circuit has strayed far from the genesis of

the inequitable conduct doctrine in this Court's jurisprudence and has created a doctrine under which extremely valuable patents can be rendered unenforceable based on conduct that is at most negligent. This disproportionate sanction decreases the incentive for invention and encourages defendants to make inequitable conduct claims in all patent litigation, dramatically increasing the cost of that litigation.

As the Federal Circuit has explained, "[t]he inequitable conduct doctrine, a judicially created doctrine, was borne out of a series of Supreme Court cases in which the Court refused to enforce patents where the patentees had engaged in *fraud* in order to procure those patents." *Digital Control Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1315 (Fed. Cir. 2006) (emphasis added) (citations omitted); *see also Star Scientific, Inc v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1365-66 (Fed.Cir. 2008) (noting that the penalty for inequitable conduct "was originally applied only in cases of 'fraud on the Patent Office'" (citations omitted), *petition for cert. filed*, 77 U.S.L.W. 3437 (2009) (No. 08-918). For many years, the inequitable conduct doctrine was applied very narrowly and played only a minor role in patent litigation. But in recent years, the doctrine has evolved to a point where it bears little resemblance to its origins, and raising such claims has become a routine part of how lawyers defend against infringement allegations. Patentees are now often deprived of valuable property rights for conduct that in no way helped them to obtain those rights, based on very weak evidence of intent, and even where the

value of the lost patent rights is vastly disproportionate to the misconduct at issue. This case cements those trends.

The decision at issue here underscores that the Federal Circuit has eviscerated the requirement of deceptive intent, by failing to require any evidence of deceptive intent beyond the evidence of materiality. *See, e.g.*, Pet. App. 33a (Rader, J., dissenting) (noting judicial trend of "exclusion of any analysis of the lofty intent requirement for inequitable conduct"). Here, as in many other cases, the Federal Circuit affirmed a district court decision inferring that an omission was intentionally deceptive based on its finding that the omitted information was highly material and its disbelief of the explanation for the omission. It did not require any separate evidence of intent. That result turns the intent requirement into a negligence standard.

The consequences of that error have been exacerbated by a second, interrelated error. While common law fraud requires materiality and reliance, the Federal Circuit has relaxed the requirement that misstatements and omissions during patent prosecution be "material" to patentability — *i.e.*, be important factors in the outcome of the prosecution. In each of the seminal Supreme Court decisions bearing on the issue, the "highly reprehensible" conduct giving rise to the "unclean hands" determination had an "immediate and necessary relation" to core issues of patentability (*i.e.*, patentees were not "punish[ed] for extraneous transgressions"). *Keystone Driller Co. v. Gen. Excavator Co.*, 290 U.S. 240, 245 (1933). Now,

however, the Federal Circuit permits the nullification of valuable patent rights on grounds that did not and could not have affected patentability, grounds that the PTO itself would not deem to be "material" under its narrower standard of materiality. *See, e.g., Digital Control Inc.*, 437 F.3d at 1316 ("the PTO's recent adoption of an arguably narrower standard of materiality does not supplant or replace our case law"). Since materiality is then used to infer intent, the weakening of the standard for materiality in turn weakens the standard for intent, as was the case here.

Third, the Federal Circuit has effectively prescribed a finding of unenforceability as the automatic sanction for a finding of inequitable conduct without any meaningful balancing to determine whether the misconduct identified justifies rendering patents unenforceable and worthless. This often results in a punishment that is grossly disproportionate to the offending conduct. *See, e.g., Nilssen*, 504 F.3d at 1233 (finding no abuse of discretion in decision to hold unenforceable patents worth hundreds of millions of dollars on grounds that post-issuance maintenance fees were underpaid by a few thousand dollars). That is precisely what happened here, where petitioner was deprived of valuable patent rights with only weak evidence of materiality and little or no evidence of intent. This is a far cry from this Court's cases where the penalty for a finding of unclean hands was dismissal only of the existing cause of action, *see Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.*, 324 U.S.

806, 819 (1945), and, then, only in a case of actual fraud.

The evolution of this jurisprudence has the effect of depriving patentees of rights to valid and otherwise patentable subject matter. It also inundates the judicial system with "an absolute plague" of litigation over whether the most minor procedural missteps constitute "inequitable conduct." *Burlington Indus., Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988). As Judge Rader put it in his dissent in the decision below:

Although designed to facilitate USPTO examination, inequitable conduct has taken on a new life as a litigation tactic. The allegation of inequitable conduct opens new avenues of discovery; impugns the integrity of patentee, its counsel, and the patent itself; excludes the prosecuting attorney from trial participation (other than as a witness); and even offers the trial court a way to dispose of a case without the rigors of claim construction and other complex patent doctrines.

Pet. App. 31a.

Equally bad, the overinclusiveness of the doctrine has had the perverse effect of frustrating the very patent examination process it was designed to protect. Fearful of inequitable conduct charges, patent applicants now engage in the practice of over-disclosure, thereby flooding the PTO with irrelevant information. See, e.g., American Bar Association Section of Intellectual Property, A Section White Paper: *Agenda for 21st Century Patent Reform* 18

(2007). Thus, a doctrine designed by this court over six decades ago as a means to promote equity has been transformed into an instrument for producing profound injustice, and in so doing, contravenes the constitutional mandate “[t]o promote the Progress of ... useful Arts.” U.S. Const. art. I, § 8, cl. 8.

ARGUMENT

I. The Federal Circuit Has Eviscerated the Important Requirement of Deceptive Intent

This Court should grant review to require affirmative evidence of deceptive intent, distinct from evidence of materiality. Under the doctrine of unclean hands, which this Court invoked in establishing the doctrine of inequitable conduct, deliberate deception is required. *See A.H. Emery Co. v. Marcan Prods. Corp.*, 389 F.2d 11, 17 n.4 (2d Cir. 1968); *Eresch v. Braecklein*, 133 F.2d 12, 14 (10th Cir. 1943). The Federal Circuit’s decision here confirms that it has effectively eradicated this requirement and adopted a “should have known” standard that equates to negligence.

The inequitable-conduct doctrine grew out of three cases from this Court, each of which involved fraudulent conduct: *Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.*, 324 U.S. 806 (1945); *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238 (1944); and *Keystone Driller Co. v. General Excavator Co.*, 290 U.S. 240 (1933). Fraud, of course, requires deliberate deception, which existed in each of these cases. *Precision Instrument*, for example, was a case where the “history of the patents and

contracts in issue [were] steeped in perjury and undisclosed knowledge of perjury" and where one of the asserted patents "was admittedly based upon false data which destroyed whatever just claim it might otherwise have had to the status of a patent." *Precision Instruments*, 324 U.S. at 816.

In the 1970s and 1980s, decisions from the regional circuits and then the Federal Circuit began to erode the requirement of deliberate deception and to replace it with a gross negligence standard although there were conflicting decisions on the issue. *See* Pet. at 20-22. By 1988, with the courts applying a weakened deceptive-intent standard, fully 80% of all patent-infringement cases included charges of inequitable conduct. *See* Ad Hoc Committee on Rule 56 and Inequitable Conduct, American Intellectual Property Law Association, *The Doctrine of Inequitable Conduct and the Duty of Candor in Patent Prosecution: Its Current Adverse Impact on the Operation of the United States Patent System*, 16 AIPLA Q.J. 74, 75 (1987). The Federal Circuit recognized that the doctrine had become "an absolute plague" on the patent system, with charges of inequitable conduct in "almost every major patent case." *Burlington Indus., Inc.*, 849 F.2d at 1422. In response, the Federal Circuit, sitting en banc, held in *Kingsdown Medical Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867 (Fed. Cir. 1988), that "intent to deceive" is indeed a requirement in all inequitable-conduct cases and that gross negligence is insufficient. *Id.* at 876.

Nonetheless, as Aventis explains in its petition, after *Kingsdown*, the Federal Circuit continued to

rely on a sliding scale of intent and materiality under which “[t]he more material [a patent applicant’s] omission or misrepresentation, the less intent that must be shown.” Pet. App. 18a. As the Federal Circuit has interpreted this standard, a knowing deception can be presumed from the fact that highly material information was omitted, because he who failed to supply highly material information *should have known* about the information’s materiality. *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1315 (Fed. Cir. 2008); *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1375-76 (2001). Moreover, the Federal Circuit has concluded that “[a] party charging inequitable conduct may make a *prima facie* case by showing an unexplained violation of the duty of candor,” shifting the burden to the inventor to explain the omission. *Paragon Podiatry Lab., Inc. v. KLM Labs., Inc.*, 984 F.2d 1182, 1192 (Fed. Cir. 1993).

The Federal Circuit has applied the “should have known” and burden-shifting standards in many cases even as, in other cases, panels have recognized that discredited explanations of good faith cannot not serve as affirmative evidence of deceptive intent. *Star Scientific*, 537 F.3d at 1368 (“RJR cannot carry its burden [of proving deceptive intent] simply because Star failed to prove a credible alternative explanation.”). This inconsistency only adds to the inequity of the cases in which intent is inferred. It also sows confusion, creating the need for guidance that the *en banc* Federal Circuit has been unwilling to provide.

The present case exemplifies the problem. In it, the district court found the omission of information by one scientist in an affidavit to be highly material and then inferred deceptive intent largely based on the “should have known standard,” placing the burden on the patentee to explain to the court the basis for the omission. The Federal Circuit affirmed.

Other cases are similar. In *Nilssen*, for example, the district court found Nilssen’s failure to inform the PTO of a lawsuit he had filed against Motorola to be highly material as a matter of law under Section 2001.06(c) of the nonbinding Manual of Patent Examining Procedure (“MPEP”) even though it was undisputed that nothing happened in *Motorola* that could have affected the pending applications. *Nilssen v. Osram Sylvania, Inc.*, 440 F. Supp. 2d 884, 909-10 (N.D. Ill. 2006), *aff’d*, 504 F.3d 1223 (Fed. Cir. 2007), *cert. denied*, 128 S. Ct. 2938 (2008). The district court then inferred intent from its finding of high materiality and its disbelief of Nilssen’s explanations for the nondisclosure. *Id.* It did so even though there was no direct evidence that Nilssen intended to deceive the PTO by omitting reference to *Motorola*, Nilssen’s testimony that he had no knowledge of MPEP § 2001.06(c) was plausible, and Nilssen had no motive to withhold information that was not relevant to patentability. The Federal Circuit affirmed the intent finding without explanation, while acknowledging that Nilssen’s “[f]ailure to cite the Motorola litigation to the PTO [Patent and Trademark Office] may have been an oversight.” *Nilssen*, 504 F.3d at 1235.

The fundamental problem with *Aventis* and *Nilssen* -- that the Federal Circuit does not require evidence of deceptive intent separate from materiality -- extends even to cases where there is not high materiality. See, e.g., *Hoffman-La Roche v. Promega Corp.*, 323 F.3d 1354, 1366-67 (Fed. Cir. 2003) (upholding findings of intent in case of low materiality based on inventor's failure to explain his error); *Novo Nordisk Pharm., Inc. v. Bio-Technology Gen. Corp.*, 424 F.3d 1347, 1361-62 (Fed. Cir. 2005) (imputing knowledge of regulatory provision to inventor). In *Nilssen*, for example, the Federal Circuit deferred to findings that Nilssen had deliberately underpaid maintenance fees on his patents, including the '270 CFL patent, even though neither the district court nor the Federal Circuit deemed Nilssen's underpayment of maintenance fees to be "highly" material, and the findings were predicated on little more than the district judge's unexplained disbelief of the inventor's plausible claims of unintentional error. 504 F.3d at 1230-33, 1235. The decision was particularly extreme given that: (1) it would have been totally irrational for Nilssen to put more than \$100,000,000 in royalties at risk by underpaying \$5,000 in maintenance fees for the '270 patent, (2) Nilssen had repeatedly made the correct amount of fees on other patents, suggesting he made such payments when he thought they were due, and (3) the Federal Circuit acknowledged that Nilssen's explanation as to why he paid lower fees was not unreasonable. *Id.* at 1227-28, 1230-33, 1235. The *Nilssen* decision was subsequently cited by Judge Rader in his *Aventis* dissent as an example of recent cases that have "too often emphasized

materiality almost to the exclusion of any analysis of the lofty intent requirement for inequitable conduct, . . . [m]erging intent and materiality at levels far below" what the law ostensibly requires. Pet. App. 35a.

To be sure, the evidence of intent need not always be direct. But *some* affirmative evidence, direct or circumstantial, is required. A finding of materiality is not itself evidence of intent. Nor is disbelief of a witness's own explanations. See, e.g., *Bose Corp. v. Consumers Union of U.S., Inc.*, 466 U.S. 485, 512 (1984) ("[D]iscredited testimony is not considered a sufficient basis for drawing a contrary conclusion."); *Moore v. Chesapeake & Ohio Ry. Co.*, 340 U.S. 573, 576 (1951) ("[D]isbelief of the [witness's] testimony would not supply a want of proof.").

As exemplified by the instant decision, the law now purports to require intent but in fact requires little more than negligence. See, e.g., James E. Hanft & Stacey S. Kerns, *The Return of the Inequitable Conduct Plague: When "I Did Not Know" Unexpectedly Becomes "You Should Have Known,"* INTELL. PROP. & TECH. L.J., Feb. 2007, at 5 ("The theme of these decisions is that, once materiality of information is found, the Federal Circuit is far more likely to infer an intent to deceive . . . than it has in the past. The trend is away from the stricter standard of *Kingsdown*, which required proof of *scienter* of the charged party, and more toward a strict liability standard."); Charles M. McMahon, *Intent to Commit Fraud on the USPTO: Is Mere Negligence Once Again Inequitable?*, 27 AIPLA Q.J. 49, 75-76 (1999) (noting renewed use of

"should have known" standard that provides an incentive to dig through plaintiff's files for a shot at rendering the patent unenforceable). The result of the relaxed intent standard is that patent cases are almost inevitably turned in part into inequitable conduct cases, increasing the cost and decreasing the predictability of patent litigation and diminishing incentives to invest in innovative technologies.

II. The Decision Below is Predicated on a Relaxed Standard of Materiality That Exacerbates the Effects of the Federal Circuit's Evisceration of the Intent Requirement

Because the sliding scale test ties the requirements for proof of intent to materiality, the intent requirement has been further watered down through a weakening of the materiality requirements. Under the Federal Circuit's test, which it applied in the case below, Pet. App. 51a, information can be material even if it does not directly affect patentability and even if the agency to which the information is submitted, the PTO, would not consider the information material.

When this Court created the doctrine of inequitable conduct in cases involving "deliberately planned and carefully executed scheme[s] to defraud," *Hazel-Atlas*, 322 U.S. at 245, its goal was "to safeguard the public in the first instance against fraudulent patent monopolies," against patents that issued *as a result of* fraud. *Precision Instruments*, 324 U.S. at 818. Where misrepresentations "were not the basis for [the patent] or essentially material to its issue," this Court concluded the

misrepresentations should not result in unenforceability. *Corona Cord Tire Co. v. Dovan Chem. Corp.*, 276 U.S. 358, 373-74 (1928). This is consistent with requirements of common law fraud that, in addition to intentional deception, there also be both materiality and reliance.

In keeping with both these requirements, some courts adopted a "but for" standard for materiality under which a misrepresentation or omission was only deemed material if the patent would not have issued "but for" the misrepresentation or omission. *See Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1362 (Fed. Cir. 1984) (citing cases). But the Federal Circuit strayed from that requirement, holding that the information withheld does not have to be objectively determinative of patentability. In keeping with the then-extant standard at the PTO, the Federal Circuit adopted a standard under which information material where there is "[1] a substantial likelihood that [2] a reasonable examiner [3] would consider it important [4] in deciding whether to allow the application to issue as a patent," regardless of whether it actually affected patentability. *Id.*

The PTO has subsequently narrowed its view of materiality somewhat, but the Federal Circuit has not. *See Digital Control, Inc.*, 437 F.3d at 1315-16. In contrast to the Federal Circuit, the PTO considers information material only if it establishes "a *prima facie* case of unpatentability" of a claim, which the PTO defines as information that "*compels* a conclusion that a claim is unpatentable." 37 C.F.R.

§ 1.56(b) (2004) (emphasis added).² By applying a standard broader than the PTO's standard, the Federal Circuit has undermined the PTO's expressed purpose for its rule: to "provide greater clarity and hopefully minimize the burden of litigation on the question of inequitable conduct." Duty of Disclosure, 57 FED. REG. 2021, 2023 (Jan. 17, 1992). It has also ignored this Court's admonishments that (1) judges should be cautious in policing information submitted to an administrative agency (here the PTO) that has the competence and expertise to police its own procedures, see *Buckman Co. v. Plaintiffs' Legal Comm.*, 531 U.S. 341, 350-51 (2001); *ABF Freight Sys., Inc. v. NLRB*, 510 U.S. 317, 323-25 (1994); *Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 524-25 (1978), and (2) that, when agencies act under delegated authority to police their own decisionmaking processes, those decisions are entitled to deference. See *National Cable & Telecomm. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 982-83 (2005) (agency action after judicial action nonetheless entitled to deference); *City of Milwaukee v. Illinois*, 451 U.S. 304, 315-19 (1981) (agency establishment of remedy pursuant to congressional scheme displaces equitable remedy).

In recent years, the Federal Circuit has further expanded the concept of materiality, departing even

² Information is also considered material if it "refutes, or is inconsistent with, a position the applicant takes in: (i) Opposing an argument of unpatentability relied on by the [Patent] Office, or (ii) Asserting an argument of patentability." *Id.*

from its own express standards requiring that information at least be *potentially* relevant to patentability. For example, in *Nilssen*, the Federal Circuit held that failure to pay maintenance fees was material even though the underpayments had no possible effect on issuance of the patents, since they were made years after the patent was issued. *Nilssen*, 504 F.3d at 1231-32. See also *Ulead Sys., Inc. v. Lex Computer & Mgmt. Corp.*, 351 F.3d 1139, 1146 (Fed. Cir. 2003). It also upheld an unenforceability ruling based on *Nilssen*'s failure to disclose to the PTO the existence of separate litigation, the *Motorola* litigation, even though it was undisputed that nothing had occurred in the litigation that was even minimally relevant to patentability. *Nilssen*, 504 F.3d at 1233-34. Many other cases have reached similar results. See, e.g., *Ferring B.V. v. Barr Labs., Inc.*, 437 F.3d 1181, 1187-90 (Fed. Cir. 2006) (holding patent unenforceable for failure to identify declarant's interest); *Hoffman-La Roche, Inc.*, 323 F.3d at 1372-81 (Newman, J., dissenting) (describing findings of materiality with respect to characterization of an experiment even though there was no dispute the experiment would work). For reasons such as these, the Senate Judiciary Committee cited *Nilssen* and other cases as examples of recent Federal Circuit decisions applying the materiality requirement in a manner that improperly underemphasizes the question whether the claimed omission or misstatement was important to the PTO's decision to issue the patent. S. Rep. No. 110-259, at 33 n.155.

The decision below is predicated on the Federal Circuit's diluted materiality standard. The Federal Circuit upheld the district court's findings that omission of certain dosage information was material based on its own standard for materiality, rather than the PTO's, or this Court's. Pet. App. 100a. Under its own standard, it affirmed findings that the omission was not just material, but highly material. Pet. App. 46a. And that finding of high materiality was a predicate of the finding of intent. Pet. App. 51a. As Judge Rader explained, high materiality was found even though: (1) Aventis corrected its mistake, and (2) the PTO reissued the patent after it had all of the correct information before it, showing that the omitted information did not establish a *prima facie* case, let alone a determinative case, of unpatentability. Pet. App. 37a. Thus, information that was not even material under the PTO's *prima facie* test, or under a *but for* test, became the basis of a finding of high materiality from which intent was inferred.

The *Aventis* case thus exemplifies the importance of a watered down notion of materiality that pervades the Federal Circuit's jurisprudence. When the watered down notion of materiality is combined with a sliding scale under which intent can be inferred from materiality, inequitable conduct can easily be inferred from small errors that did not, and in many cases could not have, affected the outcome of the patent prosecution. The result is an inequitable-conduct doctrine divorced from the goal of protecting the public from issuance of unwarranted patents.

III. The Automatic Sanction of Unenforceability Is Disproportionate

In perhaps the most harmful departure from the equitable roots of the inequitable conduct doctrine, the Federal Circuit has turned a finding of inequitable conduct into an automatic sanction of unenforceability without any weighing of the equities. As is fitting for a doctrine rooted in equity, when this Court first concluded that inequitable conduct could result in dismissal of a patent enforcement suit, it did so recognizing that there would be a "wide range to the equity court's [discretion]," taking into account private and public interests, the type of misconduct, the degree of culpability, and whether the misconduct "impregnated" the "entire cause of action and justified dismissal." *Precision Instrument*, 324 U.S. at 815, 819. But the Federal Circuit has never affirmed findings of materiality and intent and gone on to reverse a finding of unenforceability. In the case below, it did not even engage in any balancing to determine whether the misconduct identified justifies rendering patents unenforceable and worthless.

Weighing of the equities is critical given the "deeply rooted" principle that the "punishment should fit the crime." *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559, 575 n.24 (1996) (quoting *Solem v. Helm*, 463 U.S. 277, 284 (1983)). Applying that principle, this Court has articulated a number of equitable factors in evaluating the acceptability of a punishment: the reprehensibility of the offense, the

harm caused, and the magnitude of sanctions for similar misconduct. This Court has applied such factors in assessing punitive damages under the Due Process Clause, *see, e.g., BMW, Inc. of N. Am.*, 517 U.S. at 574-85; punishments under the Excessive Fines Clause, *see, e.g., United States v. Bajakajian*, 524 U.S. 321, 334 (1998); and sentences under the Cruel and Unusual Punishments Clause, *see, e.g., Solem v. Helm*, 463 U.S. 277, 284 (1983).

Courts have applied similar principles in other areas of intellectual property law. For example, courts can refuse to enforce copyrights based on fraud upon the agency, but do so “only rarely, when the [right-holder’s] transgression is of serious proportions.” 4 MELVILLE B. NIMMER & DAVID NIMMER, *NIMMER ON COPYRIGHT* § 13.09[B], at 13-310 (2006). Yet courts considering inequitable conduct do not apply these principles, as they should do, in evaluating enforceability of patents. *See* Donald S. Chisum, *Patent Law and the Presumption of Moral Regularity: A Critical Review of Recent Federal Circuit Decisions on Inequitable Conduct and Willful Infringement*, 69 J. PAT. & TRADEMARK OFF. SOC’Y 27, 32 (1987) (“[A] court should temper the sanctions for inequitable conduct to conform to the seriousness of the offense and the relationship between the conduct and the commercially significant claims in the patent.”). To the contrary, once the crime has been found, the death penalty has become automatic.

Application of the harshest penalty has a second problem as well. This Court has made clear that imposition of a penalty of unenforceability of a patent (rather than dismissal of the existing suit) is

not appropriate in a private lawsuit even for the most serious forms of inequitable conduct. It has recognized on repeated occasions that only the government may ask the judiciary to "vacate" a patent; "*such a remedy is not available in infringement proceedings*," *Hazel-Atlas*, 322 U.S. at 251 (citing *United States v. American Bell Telephone Co.*, 128 U.S. 315 (1888)); *see also Mowry v. Whitney*, 81 U.S. 434, 441 (1871). It follows that the remedy of unenforceability is also precluded, since its effect is not materially different than a decision to vacate. And, as noted by Aventis in its petition, this Court has otherwise counseled against private rights of action for fraud on administrative agencies. *Buckman Co.*, 531 U.S. at 351.

The Federal Circuit's imposition of a penalty beyond the bounds permitted by this Court, as well as its failure to articulate relevant factors such as proportionality to tailor a sanction to the facts, leads directly to decisions like this one. Here, an important patent to a life-saving drug worth over \$2 billion in annual sales has been nullified on grounds of conduct falling well short of "the most extreme cases of fraud and deception." Pet. App. 31a (Rader, J., dissenting).

Aventis is far from alone. In *Nilssen*, the Federal Circuit upheld the District Court's decision that the '270 CFL patent was unenforceable solely because Nilssen underpaid maintenance fees by \$5,000, an underpayment that had no possible effect on issuance of the patent, and for which Nilssen offered an explanation that the Federal Circuit determined was not unreasonable. *Nilssen*, 504 F.3d at 1235.

The consequences to Nilssen of the unenforceability determination was the loss of a patent worth more than \$100 million — a ratio of at least 20,000 to 1. Compare, e.g., *State Farm Mut. Auto. Ins. Co. v. Campbell*, 538 U.S. 408, 425 (2003) (noting that “few [punitive] awards exceeding a single-digit ratio . . . will satisfy due process”).

In *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006), the Court rejected the Federal Circuit’s categorical rule requiring issuance of an injunction in almost all circumstances once infringement has been found. *Id.* at 391-94. This Court held that equity requires case-by-case balancing. *Id.* A similar correction is glaringly needed here, where the Federal Circuit’s departures from the original principles of *Precision Instrument* mean that (1) gargantuan penalties may be imposed as an automatic sanction for minimal misconduct and (2) inequitable-conduct claims are being asserted routinely, threatening arbitrary deprivation of valuable property rights. It is time for this Court to intervene and reaffirm that the inequitable-conduct doctrine does not provide “a remedy for every mistake, blunder, or fault in the patent procurement process,” but rather should be restricted “to only the most extreme cases of fraud and deception.” Pet. App. 31-33a (Rader, J., dissenting). Cf. *Exxon Shipping Co. v. Baker*, 128 S. Ct. 2605, 2629 (2008) (“[W]e are acting here in the position of a common law court of last review, faced with a perceived defect in a common law remedy.”).

IV. The Court Should Grant Review Because the Evolution of the Inequitable Conduct Doctrine Has Sweeping Negative Consequences

As the standards for a finding of unenforceability have weakened in cases such as *Aventis, Nilssen* and many others, the “absolute plague” of inequitable-conduct charges has returned. See Lynn C. Tyler, *Kingsdown Fifteen Years Later: What Does It Take to Prove Inequitable Conduct?*, 13 FED. CIR. B.J. 267, 276, 283 (2003). Given the complexities of the patent process and the scientific process, it almost always will be possible to dredge up errors and claim they are intentional. See *Hoffman-La Roche*, 323 F.3d at 1381 (Newman, J., dissenting). In a recent four-year period, the percentage of cases with inequitable-conduct rulings nearly doubled, see Kevin Mack, *Reforming Inequitable Conduct To Improve Patent Quality: Cleansing Unclean Hands*, 21 BERKELEY TECH. L.J. 147, 155 (2006), leading Judge Newman to denounce the epidemic of “[l]itigation-induced assaults on the conduct of science and scientists, by aggressive advocates intent on destruction of reputation and property for private gain.” *Hoffman-La Roche*, 323 F.3d at 1372 (Newman, J., dissenting).

The vast expansion of the doctrine — with no basis in congressional action or Patent Office regulation or the decisions of this Court — has had far-reaching ramifications. The enforceability of otherwise valid patents is regularly challenged in litigation, frustrating the incentive goals of the patent system, adversely affecting decisions to invest in innovative technologies, and escalating patent-

litigation costs. The National Academy of Sciences and the National Academy of Engineering have recommended abolishing the inequitable-conduct doctrine “to reduce the cost and increase the predictability of patent infringement litigation outcomes.” National Research Council, *A Patent System for the 21st Century* 82-83 (2004); *see id.* at 121-23; *see also* Paul M. Janicke, *Do We Really Need So Many Mental and Emotional States in United States Patent Law?*, 8 TEX. INTELL. PROP. L.J. 279, 292 (2000) (noting that no other country has adopted an inequitable-conduct defense because the doctrine “truly applies only where the patent is valid but was improperly procured,” and that the “number of these instances is bound to be small and does not seem to justify putting every patentee through the cost and jeopardy of a trial on inequitable conduct”). Whether or not the judicially-created inequitable conduct doctrine should be abolished, there scarcely can be doubt that dramatic reform is long overdue.

CONCLUSION

The Writ of Certiorari should be granted.

Respectfully submitted,

JONATHAN HILL
JENNER & BLOCK LLP
330 N. Wabash Avenue
Chicago, IL 60611
(312) 222-9350

PAUL M. SMITH*
MARC A. GOLDMAN
JENNER & BLOCK LLP
1099 New York Avenue, N.W.
Washington, D.C. 20001
(202) 639-6000

February 25, 2009

* *Counsel of Record*

121

2

Supreme Court, U.S.
FILED

FEB 25 2009

OFFICE OF THE CLERK

No. 08-937

IN THE
Supreme Court of the United States

AVENTIS PHARMA S.A.
AND AVENTIS PHARMACEUTICALS INC.,
Petitioners,

v.

AMPHASTAR PHARMACEUTICALS, INC.
AND TEVA PHARMACEUTICALS USA, INC.,
Respondents.

**On Petition for a Writ of Certiorari
To the United States Court of Appeals
For the Federal Circuit**

**BRIEF OF WASHINGTON LEGAL FOUNDATION
AS AMICUS CURIAE IN SUPPORT OF PETITIONERS**

Daniel J. Popeo
Richard A. Samp
(Counsel of Record)
Washington Legal Foundation
2009 Massachusetts Ave., NW
Washington, DC 20036
(202) 588-0302

Date: February 25, 2009

WILSON-EPES PRINTING CO., INC. - (202) 789-0098 - WASHINGTON, D. C. 20002

QUESTION PRESENTED

Whether a court may refuse to enforce an otherwise valid patent on the basis of an inequitable conduct determination premised on a sliding scale between intent and materiality, with no weight whatsoever given either to the magnitude of the patent holder's blameworthiness or to whether patent examiners were ever misled.

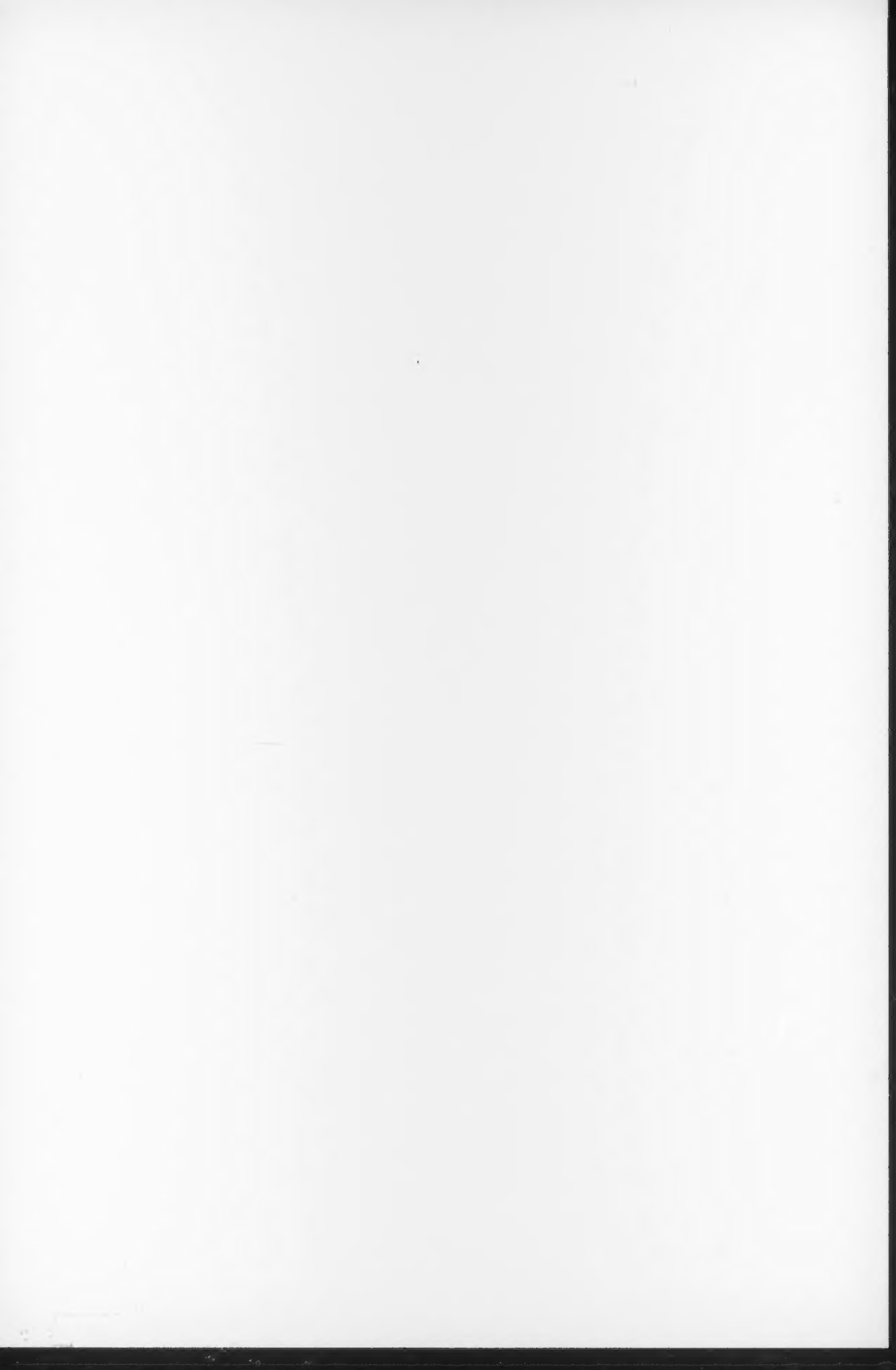


TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	v
INTERESTS OF <i>AMICUS CURIAE</i>	1
STATEMENT OF THE CASE	3
REASONS FOR GRANTING THE PETITION ...	10
I. REVIEW IS WARRANTED BECAUSE THE DECISION BELOW CONFLICTS WITH THIS COURT'S UNDER- STANDING OF WHAT CONSTITUTES "INEQUITABLE CONDUCT"	13
A. Unenforceability Determi- nations Should Be Limited to Cases in Which Patent Holders Have Committed "Unconscionable" Acts That Bear Some "Immediate and Necessary Relation" to the Equity Sought	14
B. The Federal Circuit's Inequi- table Conduct Doctrine Does Not Provide Any Mechanism for Gradation of Penalties, Nor Does It Require Consid- eration of All the Equities	19

II.	REVIEW IS WARRANTED BECAUSE OF THE TREMENDOUS UNCERTAINTY BEING CREATED BY THE FEDERAL CIRCUIT'S INEQUITABLE CONDUCT DECISIONS	22
	CONCLUSION	24

TABLE OF AUTHORITIES

Page(s)

Cases:

<i>Air Freight System, Inc. v. NLRB</i>	
510 U.S. 317 (1993)	18
<i>American Hoist & Derrick Co. v. Sowa & Sons, Inc.</i> ,	
725 F.2d 1350 (Fed. Cir. 1984)	16
<i>Burlington Industries, Inc. v. Dayco Corp.</i> ,	
849 F.2d 1418 (Fed. Cir. 1988)	9, 22
<i>Corona Cord Tire Co. v. Donovan Chemical Corp.</i> ,	
276 U.S. 358 (1928)	17-18
<i>Ferring B.V. v. Barr Labs., Inc.</i> ,	
437 F.3d 1181 (Fed. Cir.),	
cert. denied, 549 U.S. 1015 (2006)	1, 16, 22, 23
<i>Hoffman-LaRoche, Inc. v. Promega Corp.</i> ,	
323 F.3d 1354 (Fed. Cir. 2003)	16
<i>Keystone Driller Co. v. General Excavator Co.</i> ,	
290 U.S. 240 (1933)	17, 18
<i>Kingsdown Medical Consultants. Ltd.</i>	
<i>v. Hollister, Inc.</i> ,	
863 F.2d 867 (Fed. Cir. 1988)(en banc)	22
<i>Merck & Co. v. Danbury Pharmaceutical, Inc.</i> ,	
873 F.2d 1418 (Fed. Cir. 1989)	16
<i>Precision Instrument Manufacturing Co. v.</i>	
<i>Automotive Maintenance Machinery Co.</i> ,	
324 U.S. 806 (1945)	13, 14, 15
<i>Republic of Rwanda v. Uwimana</i> ,	
274 F.3d 806 (4th Cir. 2001)	18
<i>Weinberger v. Romero-Barcelo</i> ,	
456 U.S. 305, 313 (1982)	20
<i>Winter v. Natural Resources Defense Council</i> ,	
129 S. Ct. 365 (2008)	20

Page(s)**Statutes:**

35 U.S.C. § 102	4, 5
35 U.S.C. § 103	4, 5

Miscellaneous:

National Research Council, <i>A Patent System for the 21st Century</i> (2004), http://www.nap.edu/html/patent system/0309089107.pdf	23
--	----

**BRIEF OF WASHINGTON LEGAL FOUNDATION
AS AMICUS CURIAE IN SUPPORT OF PETITIONERS**

INTERESTS OF AMICUS CURIAE

The Washington Legal Foundation (WLF) is a non-profit public interest law and policy center with supporters in all 50 States.¹ WLF devotes a substantial portion of its resources to defending free-enterprise, individual rights, and a limited and accountable government.

In particular, WLF has appeared in numerous federal and state courts in cases raising issues related to health care delivery. *See, e.g., Pharmaceutical Research and Manufacturers of America v. Walsh*, 538 U.S. 644 (2003). WLF successfully challenged the constitutionality of Food and Drug Administration (FDA) restrictions on speech regarding off-label uses of FDA-approved products. *Washington Legal Found. v. Friedman*, 13 F. Supp. 2d 51 (D.D.C. 1998), *appeal dismissed*, 202 F.3d 331 (D.C. Cir. 2000). WLF also has participated in numerous court proceedings raising important issues regarding the scope and validity of pharmaceutical patents. *See, e.g., Purdue Pharma, L.P. v. Endo Pharmaceuticals, Inc.*, 438 F.3d 1123 (Fed. Cir. 2006) (opposing efforts to invalidate patent on grounds of inequitable conduct); *Ferring B.V. v. Barr Labs., Inc.*,

¹ Pursuant to Supreme Court Rule 37.6, WLF states that no counsel for a party authored this brief in whole or in part; and that no person or entity, other than WLF and its counsel, made a monetary contribution intended to fund the preparation and submission of this brief. More than ten days prior to the due date, counsel for WLF provided counsel for Respondents with notice of its intent to file this brief.

437 F.3d 1181 (Fed. Cir.), *cert. denied*, 549 U.S. 1015 (2006) (same).

WLF strongly supports providing patent protection to pharmaceutical manufacturers that develop new and useful drugs. WLF believes that if advances in health care are to continue, it is vital that companies that develop new drugs and medical devices be afforded a substantial period of exclusivity, during which potential competitors are not permitted to market the same product. That exclusivity period provides an economic incentive for new product development by ensuring that pharmaceutical companies that gamble the substantial sums necessary for the development of new therapies will be able to reap substantial rewards in those few instances in which their research and development expenditures bear fruit.

WLF also recognizes that Congress has imposed limits on patent rights and that those limits must be strictly enforced by the courts if competition is to be maintained. Nonetheless, WLF believes that the Federal Circuit's decisions in this and similar cases – which have invalidated numerous important patents on judge-made inequitable conduct grounds – have the potential to undermine our nation's patent system if allowed to stand. WLF is concerned that the Federal Circuit's "inequitable conduct" case law has drifted far afield from its "unclean hands" roots. By lowering the bar for those charging patent invalidity due to inequitable conduct, the Federal Circuit has considerably increased the risks to those asserting patent rights and considerably reduced the market value of all patents. WLF is concerned that if the property rights of patent holders can be so easily

eliminated, the public will quickly lose faith in the viability of our patent system.

WLF is filing this brief because of its interest in promoting the stability of the nation's patent system; it has no interest, financial or other, in the outcome of this lawsuit. Because of its lack of direct economic interests, WLF believes that it can assist the Court by providing a perspective that is distinct from that of any party. WLF is filing its brief with the consent of all parties; letters of consent have been lodged with the Court.

STATEMENT OF THE CASE

This case raises important issues regarding the circumstances under which it is appropriate for federal courts to decline to enforce an otherwise valid patent, on the grounds that the patent holder engaged in inequitable conduct before the U.S. Patent and Trademark Office (PTO).

Petitioners Aventis Pharma S.A., *et al.* (collectively, "Aventis"), developed (and for a number of years have been marketing) Lovenox®, a drug approved by the Food and Drug Administration (FDA) for prevention and treatment of thromboses (*i.e.*, blood clotting).

Because of Lovenox's commercial success, numerous generic drug companies are interested in marketing a generic form of Lovenox. But federal law prohibits a generic drug company from doing so, for so long as Aventis's patent on Lovenox (and on the process of making it) remains in place. Accordingly, several generic drug companies, including Respondents

Amphastar Pharmaceuticals, Inc. and Teva Pharmaceuticals USA, Inc., challenged Aventis's patent (the "'618 patent") by including – in applications to FDA for permission to market generic versions of Lovenox – an allegation that the '618 patent was invalid.

Aventis thereafter filed a suit for patent infringement against Amphastar and Teva. It was essentially forced into litigation by the invalidity allegation; had it not responded to the allegation by filing suit, Amphastar and Teva could have obtained permission from FDA to begin generic marketing immediately. Amphastar and Teva counterclaimed, alleging that the '618 patent was invalid on several grounds, including that it had been obtained through inequitable conduct.

The inequitable conduct allegation centered around Aventis's omission of allegedly material information from its patent application. In her initial response to Aventis's patent application, the patent examiner (PE) had indicated that the application was deficient both because the invention was anticipated by prior art (and thus did not meet the patentability requirements of 35 U.S.C. § 102) and because its subject matter would have been obvious to a person having ordinary skill in the art (and thus did not meet the patentability requirements of 35 U.S.C. § 103). In response to the PE's concerns, Aventis submitted a wide range of materials, including materials designed to demonstrate that its invention had increased stability in comparison to the prior art. To demonstrate that increased stability, Dr. Andre Uzon (acting on behalf of Aventis) submitted material comparing the half-life for its invention with the half-life of the prior art. The

submitted materials disclosed that the half-life for the invention was measured using 40 mg and 60 mg dosages, but they did not disclose the dosage at which the half-life of the prior art was measured (it was 60 mg). Amphastar and Teva argue that the omitted dosage was material because a reasonable PE would have wanted to know that Dr. Uzon, in comparing the half-life of a 40 mg dosage of the invention to the half-life of the prior art, was comparing two substances at different dosages.

By the time the PE issued the Third Office Action on March 2, 1993 (*id.* at 43a), she had withdrawn her anticipation objection under § 102, but she continued to raise obviousness objections under § 103. Pet. App. 9a, 25a. The PE stated that the “[a]pplicant has failed to provide evidence that the alleged difference between the half-life of the [prior art] and that of the [claimed] mixture is statistically significant.” *Id.* at 10a. In other words, the PE could not have relied on evidence regarding differences in half-lives in deciding to withdraw her anticipation objection, but rather must have relied on other types of evidence submitted by Aventis to establish the absence of anticipation. See, e.g., *id.* at 5a, 8a, 22a.²

² The purposes for which Dr. Uzan submitted half-life comparisons bears on the issues of materiality and intent. The courts below and the parties agreed that a comparison between half-lives of two substances is not relevant to § 102 anticipation issues if they are being compared at different dosages (see, e.g., *id.* at 63a-65a), and thus a reasonable patent examiner when evaluating anticipation would want to know if the dosages were different. Aventis contends that Dr. Uzan was making those comparisons for the purpose of demonstrating nonobviousness, not for the purpose of refuting anticipation. Because Dr. Uzan

The PE ultimately withdrew the obviousness objections as well, and the '618 patent was issued. In an apparent effort to demonstrate that the half-life comparisons contained in Example 6 were irrelevant to patentability, Aventis resubmitted its patent application without including Example 6. In response to that resubmission, the PTO issued Aventis a new patent with identical claims (the '743 patent) prior to any substantive district court decision in this case.

On April 10, 2006, the Federal Circuit affirmed the district court's summary judgment determination that Aventis's omission of prior art dosage information in connection with the half-life comparison was a "material" omission. *Id.* 95a-109a. The appeals court held that there was no genuine issue that "a reasonable examiner would have considered [the dosage information] important in deciding" whether to grant the patent, and thus that Aventis's omission was "material" as a matter of law. *Id.* 100a.

submitted his two declarations after the Third Office Action was issued in March 1993 (and thus after the PE had withdrawn the anticipation objection), there is no basis for concluding that the statements regarding half-life comparisons contained in those two declarations were made for the purpose of refuting anticipation. Dr. Uzon's first declaration was submitted on March 29, 1993 (*id.* at 45a n.4), four weeks after the Third Office Action was issued – albeit the Federal Circuit included language in its decision suggesting that it believed that the anticipation issue might still have been open at the time the first declaration was submitted. *See id.* at 24a-25a. Although Example 6 in the '618 patent application (submitted several years prior to the Third Office Action) included half-life comparisons while omitting dosage information for the prior art, the language from the Third Office Action (quoted in the text) makes plain that the PE did not rely on those half-life comparisons in deciding to withdraw the anticipation rejection.

On remand, the district court chose not to focus on validity and infringement issues, but rather conducted a trial that addressed only the "inequitable conduct" defense. After trial, the district court concluded that Aventis had, indeed, engaged in inequitable conduct in pursuing its patent application and thus it declared the '618 and '743 patents unenforceable. *Id.* at 39a-91a. Based on its finding that Aventis did not provide an adequate explanation for its failure to include dosage information that it should have known was material, the district court determined that Aventis intended to deceive the PTO. *Id.* at 90a.³ See also *id.* at 87a (intent to deceive can be inferred because Aventis knew or should have known that highly material information was omitted, and provided "no credible excuse" for the omission).

The district court recognized that findings of materiality and intent to deceive did not end the matter; rather, it still had to decide whether in light of all the facts, "the severe sanction of holding the patent unenforceable was warranted." *Id.* The court held that unenforceability was warranted based on a single determination: "But for Dr. Uzan's intentional omissions, the probability is high that the '618 patent

³ The court interpreted the Federal Circuit's prior decision as establishing that Aventis's omission was "highly material," *id.* at 46a, and thus that intent to deceive could be established based on a lower level of proof. Citing Federal Circuit precedent, the district court held, "The quantum of proof required to show intent is tied to materiality; the more material the omission or the misrepresentation, the lower the level of intent required to establish inequitable conduct." *Id.* at 49a (citation omitted).

would not have issued.” *Id.*⁴

A divided Federal Circuit panel affirmed. *Id.* at 1a-38a. It did so despite finding that the district court had made several significant errors. For example, it held that the district court erred in concluding “that obviousness is subsumed by inherency” (*i.e.*, that § 102 anticipation issues (“inherency”) predominated throughout PTO proceedings and thus that the half-life comparisons could only have been included for the purpose of refuting anticipation, not for the purpose of demonstrating nonobviousness). *Id.* at 21a.⁵ It held that the district court also clearly erred in determining that the anticipation rejection was still pending at the time that the PE issued the Third Office Action (*i.e.*, at a time prior to Dr. Uzan’s submission of his declarations). *Id.* at 25a. The appeals court determined that those errors were insufficient to warrant reversal because there was other evidence that Aventis had acted with deceptive intent at earlier stages of the PTO proceedings (*i.e.*, prior to the Third Office Action). *Id.*

⁴ That determination was left unexplained. It is also inexplicable, given that Aventis was granted the ’743 re-issue patent several years prior to the district court’s determination. Because the PTO granted the ’743 patent despite the elimination of all reference to half-life comparisons, there is no reason to conclude that the ’618 would not have issued had it included more complete dosage information.

⁵ As noted above, there was no finding below that it would have been inappropriate for Aventis to seek to demonstrate nonobviousness by comparing the half-lives of Lovenox and the prior art at different dosage levels. Thus, omission of the fact that the half-lives were compared at different dosage level was material only if the comparison was undertaken for the purpose of refuting anticipation.

The panel majority upheld the district court's materiality and intent to deceive findings under a "clear error" standard of review and its unenforceability determination under an "abuse of discretion" standard. *Id.* at 17a. It recognized that, under Federal Circuit precedent, a finding of "inequitable conduct" sufficient to warrant an "unenforceability" determination should be based on a sliding scale involving materiality and intent. *Id.* at 18a ("The more material the omission or misrepresentation, the less intent that must be shown to elicit a finding of inequitable conduct."). But the majority upheld the unenforceability determination without commenting on the district court's complete failure to engage in such a sliding scale analysis.⁶

Judge Rader dissented. *Id.* at 31a-38a. He concluded that Amphastar and Teva failed to present clear and convincing evidence of intent to deceive. *Id.* at 31a. He complained that the Federal Circuit was increasingly willing to hold patents unenforceable based on meager materiality and intent showings, *id.* at 33a, with the result that the once-ubiquitous "inequitable conduct tactic" was being "rejuvenated" and was returning to the "plague" levels that the court had complained of in the 1980s. *Burlington Indus. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988). He argued that unenforceability determinations based on inequitable conduct should be restricted "to only the most extreme cases of fraud and deception." *Id.* at 31a.

⁶ Rather, as noted above, the district court engaged in a sliding scale analysis only in connection with its initial finding of deceptive intent – finding that "[t]he quantum of proof required to show intent" is lessened when, as here, the trial court has made a finding that the omission is highly material. *Id.* at 47a.

REASONS FOR GRANTING THE PETITION

The petition raises issues of exceptional importance. This case is yet another example of the willingness of the Federal Circuit to invalidate multi-billion dollar patents based on findings of relatively minor errors by patentees. WLF fully agrees with Aventis that a major part of the problem is the "sliding scale" adopted by the Federal Circuit, whereby patent holders often are deemed to have intended to deceive the PTO based on conduct that amounts to little more than gross negligence.

WLF writes separately to urge the Court to grant review on the grounds that the entire "inequitable conduct" doctrine is in need of a major overhaul. The Court created that doctrine 60 years ago for the purpose of policing the conduct of parties that engage in wholesale fraud before the PTO. But the doctrine has morphed into a trap for the unwary, whereby hugely valuable patents are overturned without regard to the blameworthiness of the patent holder. Whenever a patent challenger can identify information that was not supplied to the PTO but that a PE might have found useful in determining patentability, and whenever a plausible case can be made that the patentee should have known that a reasonable PE would have found the information useful (and thus can be found to have intended to deceive the PTO), the patentee now faces a serious danger that its patent will be invalidated. That danger exists irrespective of whether the patentee can be deemed blameworthy to any significant degree; only materiality and intent, not blameworthiness, enter into the equation. The danger exists even if the PE was not deceived and/or did not rely in any way on the

patentee's omission; indeed, the Federal Circuit explicitly held in this case that absence of reliance is irrelevant in determining whether a patent should be held unenforceable on inequitable conduct grounds. The danger also exists without regard to whether the patentee would have been granted its patent had it supplied the PTO with the omitted evidence.

Review is warranted to once and for all rein in a doctrine that has accurately been termed a "plague" that now infects virtually all patent litigation. As Judge Rader noted in his dissent below, the inequitable conduct doctrine was intended to apply "to only the most extreme cases of fraud and deception." Pet. App. at 31a. Yet, it has expanded to the point that it is now a potent weapon in virtually every patent lawsuit. This case provides a particularly good vehicle for re-visiting the doctrine. It is a case in which we know with virtually 100% certainty (based on the grant of the '743 re-issue patent) that the '618 patent would have been granted even if Aventis had included the omitted dosage information. It is a case in which the omitted information, although deemed "material" to patentability by the district court, was not an omission whose natural tendency was to deceive – it would have been readily apparent to a reasonably inquisitive patent examiner that (s)he had not been given dosage information for the prior art. Indeed, the record is clear that the PE in this case was *not* deceived; she indicated in the Third Office Action in March 1993 that she was unpersuaded by the half-life comparison because the claimed difference in half-lives was not "statistically significant." *Id.* at 10a. Nor is this a case in which the alleged deception was widespread or otherwise particularly blameworthy. While the PTO and the

federal courts quite obviously have an interest in sanctioning any patent applicant, including Aventis, that has been determined by a district court to have engaged in deceptive behavior, the nature of the deception in this case was sufficiently technical that authorizing an unenforceability sanction here is tantamount to a determination that unenforceability is an appropriate sanction in virtually every case in which materiality and intent to deceive are found.

Review is also warranted because of the tremendous uncertainty among patent holders being created by the Federal Circuit's inequitable conduct decisions. At the same time that the Federal Circuit is inexorably expanding the definition of a "material" omission, it is reducing the level of proof necessary to establish intent to deceive. Review is warranted to permit this Court to establish a readily comprehensible inequitable conduct standard on which applicants can rely. In the absence of such certainty, there is a very real danger that investors will become far less willing to risk the huge amounts of capital necessary to develop new, life-saving therapies. Any such decrease in research and development expenditures cannot bode well for the future of health care in this country.

I. REVIEW IS WARRANTED BECAUSE THE DECISION BELOW CONFLICTS WITH THIS COURT'S UNDERSTANDING OF WHAT CONSTITUTES "INEQUITABLE CONDUCT"

Review is warranted because the Federal Circuit has departed so fundamentally from this Court's rationale for creating an "inequitable conduct" defense to a patent infringement claim. As the Court explained more than 60 years ago, "[t]he guiding doctrine" in patent cases in which inequitable conduct is alleged "is the equitable maxim that he who comes into equity must come with clean hands." *Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.*, 324 U.S. 806, 814 (1945). The "unclean hands" doctrine "closes the doors of a court of equity to one tainted with inequiteness or bad faith relative to the matter in which he seeks relief." *Id.* An important limitation on application of the unclean hands doctrine is that it has never been applied to a plaintiff based simply on the fact that the plaintiff has engaged in misconduct; rather, the doctrine is strictly limited to situations in which some unconscionable act committed by the plaintiff has *immediate and necessary* relation to the equity he seeks.

One searches the Federal Circuit's "inequitable conduct" decisions in vain for any indication that that court is basing its decisions on anything remotely resembling the "unclean hands" approach mandated by *Precision Instrument*. Instead, the Federal Circuit has developed an elaborate set of rules for determining when omitted information should be deemed material and when the patentee should be deemed to have acted

with the requisite intent. Once those findings are made, trial courts are granted virtually free rein to declare the patent unenforceable, without regard to the magnitude of the patent holder's blameworthiness or to whether patent examiners were actually misled. All too frequently, the result of those rules has been travesties such as the decision at issue here: a patent is struck down based on alleged "inequitable conduct" based on a relatively minor omission of information, despite *the absence of any evidence that the PE drew any inaccurate inferences from the omission or that she relied on such inferences to her detriment*. By interpreting materiality, intent, and inequitable conduct so broadly, the Federal Circuit in essence is attempting to write the rules of evidence for the PTO; such rules have little relationship to the "unclean hands" doctrine and – because they are being written after the fact – have thrown into doubt the validity of numerous existing patents. Review is warranted to resolve the sharp conflict between this Court's understanding of "inequitable conduct" and the Federal Circuit's recent "inequitable conduct" decisions.

A. Unenforceability Determinations Should Be Limited to Cases in Which Patent Holders Have Committed "Unconscionable" Acts That Bear Some "Immediate and Necessary Relation" to the Equity Sought

It has now been more than 60 years since the Court last addressed the circumstances under which an otherwise valid patent should be held unenforceable based on the applicant's inequitable conduct before the Patent Office. That case, *Precision Instrument*, held a patent unenforceable based on findings that: (1)

Automotive, the applicant, learned that a competing applicant had committed perjury during interference proceedings; (2) Automotive used that information to blackmail the competing applicant into assigning his patent rights to Automotive and agreeing never to contest the resulting patent; (3) Automotive never revealed the patent's fraudulent ancestry to the Patent Office; and (4) the result of its actions was that Automotive was issued a patent with claims broader than those to which Automotive was actually entitled. *Precision Instrument*, 324 U.S. at 818-19. The Court held that those facts "all add up to the inescapable conclusion that Automotive has not displayed that standard of conduct requisite to the maintenance of this suit in equity," and it applied the "unclean hands" doctrine to deny enforcement of any part of the patent. *Id.* at 819.

As Petitioners note, in the ensuing decades the federal appeals courts struggled to determine just how relevant the omitted information must be to issues raised in PTO proceedings before the omission can be deemed material and intentionally deceptive, and just how egregious the patent holder's misconduct must be to warrant application of the "unclean hands" doctrine. Pet. 20-21. The appeals courts developed at least three conflicting standards of materiality, intent, and unclean hands. *Id.*

Following creation of the Federal Circuit, that court adopted far broader standards. For example, omitted data are deemed sufficiently material where there is "a substantial likelihood" that a reasonable examiner would consider them "important" in deciding to allow the application to issue as a patent. *American*

Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1362 (Fed. Cir. 1984). Intent and materiality are considered on a sliding scale, so that the “quantum of evidence required to show intent” is reduced when the materiality of the omitted data is deemed high. Pet. App. 49a. A patentee can be deemed to have intended to deceive the PTO if the trial court deems insufficiently credible the patentee’s explanation for failing to supply the data. *Ferring*, 437 F.3d at 1191. The trial court is to determine whether the patentee engaged in inequitable conduct (and thus whether the patent should be declared unenforceable) based solely on the strength of the evidence regarding materiality and intent. *Hoffman-LaRoche, Inc. Promega Corp.*, 323 F.3d 1354, 1372 (Fed. Cir. 2003). Thus, whether a patent is declared unenforceable bears no relation to the magnitude of its blameworthiness; if the evidence is sufficiently clear that the patentee intended to deceive the PTO by withholding material evidence, a gargantuan penalty is imposed, regardless whether the scope of the deceit was relatively minor. It is sufficient that a reasonable patent examiner would have considered the omitted material “important.” Moreover, for purposes of determining inequitable conduct, it does not matter whether a reasonable examiner would have been misled by the omission or whether the actual examiner was, in fact, misled: the omitted material “need not be relied on by the examiner in deciding to allow the patent. The matter misrepresented need only be within a reasonable examiner’s realm of consideration.” Pet. App. 134a-135a (quoting *Merck & Co. v. Danbury Pharmacal, Inc.*, 873 F.2d 1418, 1421 (Fed. Cir. 1989)).

Those standards of materiality, intent, and

inequitable conduct bear little resemblance to “unclean hands” doctrine and conflict sharply with this Court’s understanding of what constitutes “inequitable conduct.” In particular, the Federal Circuit’s sliding-scale approach fails to heed this Court’s admonition regarding strict limits on application of “unclean hands” doctrine:

But courts of equity do not make the quality of suitors the test. They apply the maxim requiring clean hands only where some *unconscionable* act of one coming for relief has *immediate and necessary relation* to the equity that he seeks in respect of the matter in litigation.

Keystone Driller Co. v. General Excavator Co., 290 U.S. 240, 245 (1933) (emphasis added).

In *Keystone Driller*, the Court applied “unclean hands” doctrine to dismiss a patent infringement action, where the evidence showed that: (1) an individual may have engaged in prior use of the claimed invention (a circumstance which, if true, would have invalidated a patent); (2) following issuance of the patent, the patentee paid the individual not to disclose his prior use and to sign an affidavit stating that his use of the device was merely an abandoned experiment; and (3) the individual failed to disclose these arrangements in his subsequent deposition. *Id.* at 243. But in other cases, the court has declined to apply “unclean hands” doctrine where the plaintiffs’ misconduct did not have a sufficiently “immediate and necessary relation” to the equitable relief sought, to warrant non-enforcement of the patent. *See, e.g., Corona Cord Tire Co. v. Donovan Chemical Corp.*, 276 U.S. 358, 373-74 (1928) (applicant’s

submission of false affidavits to Patent Office did not warrant non-enforcement of patent, because the falsehoods were not crucial to issuance of the patent).

In more recent times, the Court upheld the NLRB's decision not to apply the "unclean hands" doctrine to bar reinstatement of a fired employee, despite the employee's perjured testimony regarding the reason he was late for work. *Air Freight System, Inc. v. NLRB*, 510 U.S. 317 (1993). The NLRB had reasoned that the perjury was not sufficiently material to the issue of reinstatement, because (the NLRB determined) the employee had actually been fired in retaliation for union activity, not (as the company alleged) because of his tardiness. *Id.* at 321. Similarly, the Fourth Circuit declined to apply the "unclean hands" doctrine to bar an award of equitable relief to a foreign government accused of persecuting a political opponent, where there was no "close nexus between a party's unethical conduct and the transactions on which that party seeks relief." *Republic of Rwanda v. Uwimana*, 274 F.3d 806, 810 (4th Cir. 2001) (citing *Keystone Driller*).

The decisions below – as well as numerous other inequitable conduct decisions arising out of the Federal Circuit – cannot be squared with the "unclean hands" standards set forth in *Keystone Drilling*. Review is warranted to address that conflict.

B. The Federal Circuit's Inequitable Conduct Doctrine Does Not Provide Any Mechanism for Gradation of Penalties, Nor Does It Require Consideration of All the Equities

Review is also warranted because of a fundamental deficiency in the Federal Circuit's inequitable conduct case law: when a patentee is determined to have acted wrongly, the only sanction provided for under that case law is an order declaring the patent unenforceable. Such an all-or-nothing approach inevitably biases the outcome in favor of draconian penalties once the patentee has been determined to have acted wrongfully. Moreover, the Federal Circuit case law is deficient in not requiring district courts to consider all the equities before granting equitable relief.

Absent from the decision below or Federal Circuit inequitable conduct case law is a recognition of the extraordinary nature of equitable relief. Indeed, the Federal Circuit in this case indicated that the district court's unenforceability determination was subject to abuse-of-discretion review, Pet. App. 17a, and then it omitted any discussion of such review from its decision. Had it included such a discussion, it would have been forced to concede that the district court explicitly declined to engage in any sort of weighing of the equities. *Id.* at 91a ("The Court need not be detained by intricate questions of weight.").⁷

⁷ Instead, the district court based its unenforceability determination on a single statement: "But for Dr. Uzon's intentional omissions, the probability is high that the '618 patent

Injunctive or declaratory relief “is a matter of equitable discretion; it does not follow from success on the merits as a matter of course.” *Winter v. Natural Resources Defense Council, Inc.*, 129 S. Ct. 365, 381 (2008). “[A] federal judge sitting as chancellor is not mechanically obligated to grant an injunction for every violation of the law.” *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 313 (1982). Among the factors that federal judges must take into account in determining whether to grant injunction relief are the balance of equities among the parties and the public interest. *Winter*, 129 S. Ct. at 381.

The district court engaged in no such analysis, nor was it required to do so by Federal Circuit case law

would not have issued.” *Id.* The court included no citation to support that statement, and it cannot be taken seriously in light of the PTO’s decision to grant the ’743 re-issue patent several years earlier. *See supra* at 8 n.4.

Indeed, the district court’s seemingly cavalier attitude toward the unenforceability determination well illustrates a major problem caused by the Federal Circuit’s lax inequitable conduct standards. Patent cases can be extraordinarily complex, and it can require considerable resources for a federal district judge to decide whether a patent was validly issued and/or whether it was infringed. As Judge Radar noted in his dissenting opinion, the inequitable conduct doctrine provides district courts with an easy out – they can avoid addressing the more difficult invalidity and infringement issues by making an inequitable conduct finding. Pet. App. 31a-32a (“The allegation of inequitable conduct . . . even offers the trial court a way to dispose of a case without the rigors of claim construction and other complex patent doctrines. This court has even observed a number of cases, such as this one, that arrive on appeal solely on the basis of inequitable conduct where the trial court has apparently elected to try this issue in advance of the issues of infringement and validity.”)

– which directs district courts merely to look at the extent of materiality and intent to deceive, and to apply a sliding-scale test involving those two factors. Based on the factual findings that Aventis engaged in misconduct, some type of sanction might be appropriate (*e.g.*, a fine or an order re-opening the patent proceedings). But, given the evidence of Aventis's rather limited culpability (*see, e.g.*, the discussion of the underlying facts set forth *supra* at 4-8), the Federal Circuit would have a difficult time explaining why it is equitable to determine that a multi-billion dollar patent should be held unenforceable. Amphastar and Teva, generic manufacturers who played no role in the PTO proceedings and are merely hoping to make a profit from Aventis's misfortune, would seem to have few equities in their favor.

It is unclear precisely where the public interest would lie. On the one hand, there is a public interest in providing an incentive for patent applicants to be honest in their dealings with the PTO. On the other hand, there is a public interest in maintaining public confidence in the patent system; and if the public comes to believe that valuable patents will be invalidated based on minor transgressions, individuals will be less likely to devote the extraordinary time and resources necessary to develop new, potentially life-saving products. But the important point is this: the Federal Circuit does not require *any* balancing of the public interest in inequitable conduct cases. Review is warranted to resolve the conflict between this Court's traditional equitable principles and the Federal Circuit's inequitable conduct case law.

II. REVIEW IS WARRANTED BECAUSE OF THE TREMENDOUS UNCERTAINTY BEING CREATED BY THE FEDERAL CIRCUIT'S INEQUITABLE CONDUCT DECISIONS

As Petitioners have well documented, the Federal Circuit's expansion of the inequitable conduct doctrine far beyond its unclean hands origins has led to inclusion of inequitable conduct defenses in virtually all patent infringement actions. Pet. 24-28. The Federal Circuit itself has described the proliferation of such claims as "an absolute plague" on the patent system. *Burlington Industries, Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988). The Federal Circuit attempted to address that problem a number of years ago by tightening somewhat the standards for establishing that a patent applicant intended to deceive the PTO. See *Kingsdown Medical Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876-77 (Fed. Cir. 1988) (*en banc*). But as this case illustrates, *Kingsdown* has not been consistently followed, and the Federal Circuit continues to apply broad standards regarding what constitutes materiality, intent to deceive, and inequitable conduct. As Judge Newman argued in dissent in *Ferring*, the Federal Circuit:

[N]ot only ignore[s] *Kingsdown* and restore[s] a casually subjective standard, they also impose a positive inference of wrongdoing, replacing the need for evidence with a "should have known" standard of materiality, from which deceptive intent is inferred, even in the total absence of evidence. Thus the panel majority infers material misrepresentation, infers malevolent

intent, presumes inequitable conduct, and wipes out a valuable property right, . . . on the theory that the inventor "should have known" that something might be deemed material.

Ferring, 437 F.3d at 1996 (Newman, J., dissenting).

It is difficult to overestimate the chilling effect that such decisions have on the research and development activities that the patent system is intended to foster. If the business community loses faith in the willingness of courts to uphold patents, they are unlikely to be willing to continue to invest the hundreds of millions of dollars typically required to bring a new drug through research and testing and eventually to obtain marketing approval. Indeed, the costs and uncertainties associated with application of the inequitable conduct doctrine led the National Research Council of the National Academies of Science and Engineering in 2004 to recommend "the elimination of the inequitable conduct doctrine or changes in its implementation." National Research Council, *A Patent System for the 21st Century* (2004) at 123, <http://www.nap.edu/html/patentsystem/0309089107.pdf>. Review is warranted to prevent the Federal Circuit's inequitable conduct standards from further eroding confidence in our patent system.

CONCLUSION

Amicus curiae Washington Legal Foundation respectfully requests that the Court grant the petition for a writ of certiorari.

Respectfully submitted,

Daniel J. Popeo
Richard A. Samp
Washington Legal Foundation
2009 Massachusetts Ave., NW
Washington, DC 20036
(202) 588-0302

Dated: February 25, 2008